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ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1946

BY

J. L. BURN, M.D., D.Hy., D.P.H.,

MEDICAL OFFICER OF HEALTH

City of Salford

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Members of the Health Committee,

1946-47.

Alderman W. W. Crabtree, *Chairman.*

Councillor G. H. Goulden, *Deputy-Chairman.*

Councillor T. Clarke, J.P. (*Mayor*).

Alderman J. Lemmon, J.P. (*Deputy-Mayor*).

,, Brentnall, J.P.

,, Higginbottom.

,, Sands, G. W., J.P.

,, Shlosberg, J.

,, Webb, J. A., J.P., M.B.E.

,, Webb, L.

Councillor Bell.

,, Brookes.

,, Butler.

,, Fearnehough.

,, Mallinson.

,, Openshaw, J.P.

,, Pugh.

,, Whitehead.

STAFF.

Public Health Department—1946.

Medical Officer of Health Administrative Tuberculosis Officer	J. L. Burn, M.D., D.Hy., D.P.H.
Clinical Tuberculosis Officer	R. N. Walker, M.D., D.P.H.
Maternity and Child Welfare Medical Officers	M. Sproul, M.B., Ch.B., D.P.H. K. M. Boyes, M.B., Ch.B., D.P.H. M. Maxwell-Reekie, M.B., Ch.B.
City Pathologist	G. J. Crawford, B.Sc., M.D., M.R.C.P. (Lond.), D.P.H.
Assistant Pathologist	L. Stent, M.D., M.R.C.S., L.R.C.P.
Venereal Diseases Medical Officer	A. J. Gill, M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.
Asst. Venereal Diseases Medical Officers.	F. M. Blades, M.B., Ch.B. A. W. Ritchie, M.B., Ch.B., D.P.H. (part-time).

HOPE HOSPITAL.

Whole-time Staff.

Medical Superintendent	George Brown, M.B., Ch.B., F.R.C.S. (Edin.).
Deputy Medical Superintendent and Physician	William Mackay, M.D., F.R.F.P.S. (Glas.).
Obstetric Officer	C. G. Roworth, M.R.C.S., L.R.C.P., M.B., B.S. (Lond.), M.R.C.O.G.
Surgeon	C. Grimshaw, M.B., Ch.B., F.R.C.S. (Edin.).
Assistant Medical Officers	Seven.

Visiting (Part-time) Staff.

Visiting Specialist in Children's Diseases	Catherine Chisholm, C.B.E., B.A., M.D. (Manch.).
Orthopædic Surgeon	S. M. Milner, M.A., M.B., Ch.B. (Cantab. and Manch.), M.R.C.S., L.R.C.P. (Lond.), F.R.C.S. (Eng.).
Surgeon for Diseases of the Ear, Nose and Throat	W. B. McKelvie, M.D., F.R.C.S. (Edin.).
Anæsthetist, Radiologist and Lecturer	J. Ghosh, F.R.C.S.I., D.P.H.
Matron	Miss K. Martin, S.R.N., S.C.M.
Steward	C. A. A. Hankins, F.C.C.S., F.H.A.

LADYWELL SANATORIUM.

Medical Superintendent	W. Edge, M.R.C.S., L.R.C.P., D.P.H.
Assistant Resident Medical Officer	Miss M. Kamiel, M.D.U. (Leipzig).
Visiting Aural Surgeon..............	W. B. McKelvie, M.D., F.R.C.S. (Edin.).
Matron..................................	Miss M. A. Hitchen, S.R.N., S.C.M.

NAB TOP SANATORIUM.

Medical Superintendent	H. M. Fleming, B.A., M.D., Ch.B., B.A.O., D.P.H.
Consultant Thoracic Surgeon.......	A. Graham Bryce, M.D., F.R.C.S., D.P.H.
Matron..................................	Miss M. D. Chisholm, S.R.N.

Public Analyst	G. H. Walker, Ph.D., B.Sc., F.R.I.C., to 31st January, 1946. A. N. Leather, B.Sc., F.R.I.C., from 4th March, 1946.
Chief Administrative Assistant ...	E. Wood, C.R.S.I.
Chief Sanitary Inspector	P. Pilgrim, C.R.S.I.

INTRODUCTION.

To the Chairman and Members of the Health Committee.

Mr. Chairman, Ladies and Gentlemen,

Annual Health Reports are often regarded as dull documents, but the story of public health progress concerns the life of every citizen, and is all-important to the health of the individual and of the community. The dry facts and figures given in these pages represent a drama of health and life of Salford people and of the forces waging war against disease and death.

The year 1946 was one of great achievement, of which it is difficult to write in cold, cautious and official terms. The general death rate (13·3) was the lowest for many years ; the birth rate (22·7) the highest for many years (3,849 births occurred—an increase of over 800 on the previous year). Yet, for the first time the infant mortality rate was below 60. It was, in fact, 53 per 1,000, which is not only by far the lowest ever recorded in Salford, but in view of our adverse social and housing conditions, represents a notable achievement. Our housing conditions were bad enough in pre-war days, but they have got steadily worse and worse ; to possess a record low infant mortality rate is remarkable. It could not have been realised had it not been for the measures which you have instituted. It is a poor public health heart that never rejoices, and we may be encouraged and proud of the far greater proportion of Salford babies who now reach their first birthday, safe and sound.

Interesting evidence that suggests progress is also seen in the increased height and weight of a large sample of five-year-old Salford children in 1946 as compared with 1936. On the average they were ·4 inch taller and 1·8 lbs. heavier.

No single service, department or measure is responsible for these figures. They are the result of cumulative attacks by the community on disease, ignorance, squalor, want and idleness ; whilst the public health service takes an increasingly comprehensive view of the whole of the life of the citizen ; his mind and body, his family, his work and wages, his home and social background.

A remarkable victory has been won against *diphtheria*. Over four-fifths of our children 0-15 years were immunised at 31st December, 1946, and the proportion of immunised children is still rising.

In pre-war days it was common for three hospital wards, containing up to 100 diphtheria patients, from Salford and surrounding areas, to be fully occupied. Now it is remarkable if there are three patients, and these may be adolescent or adult or non-Salford cases. The success already attained encourages us to pursue our immunisation efforts to the utmost in order that we may wipe out diphtheria.

We have carried out an interesting investigation on the susceptibility to diphtheria of *mothers* attending an ante-natal clinic. Of 532 expectant mothers tested (by schick test) 78 per cent. were " negative " or insusceptible, and 22 per cent. " positive " or susceptible. All these mothers who were susceptible to diphtheria were immunised, not only to protect the mother from possible infection by diphtheria, but also that the protection might pass through to the unborn baby. We have tested the babies and find that of those mothers who received the full course of injections, all the babies were negative to the test. There is no doubt that protection, temporarily, can be transmitted. This is of importance, for diphtheria may attack infants in the first year of life, yet it is usual for immunisation of the infant to be commenced towards the end of the first year of life.

The lowest number of deaths from *tuberculosis* recorded in any year of our history occurred in 1946. A small but interesting development in the tuberculosis service has been the adoption of the " night sanatorium " policy. Two adults were allowed to sleep at night at Ladywell Sanatorium and pursue their ordinary work during the day. At the time of writing, this principle is being extended ; for there is a type of case in which, both from the point of view of the individual and of the community, it is not only safe, but strongly advisable that he should continue his work in the day-time, whilst have the benefits of sanatorium life when not at work.

Many important public health services are fully dealt with in the body of the report. I commend the sections on *housing* and *hospital* services to your study. The hospital services have been closely integrated with the health services. It is hoped that any future change under the National Health Service Act will mean no lessening of the existing close co-ordination between home, clinic and hospital services.

The *disinfestation* service not only gave effective treatment to many hundreds of houses, but, thanks to the co-operation of the Corporation Housing Department, of landlords, and of tenants, the service more than paid for itself.

I would bring to your notice the increasing improvements of the *personal health services* you instituted in 1946 ; examples are in the attendance of a *psychologist* at our maternity and child welfare centres ; the encouragement of *breast feeding* through our public health staff and through the breast feeding clinic ; the investigation and care of the *problem families* (in which a great amount of work was quietly done with the help of voluntary bodies) and the sending of a number of mothers and families to a *recuperation* centre.

Consistently, the aim has been to make available the best services to the mass of the people. Thus, for example, the best specialist advice has been made available to mothers before, during, and after confinement.

In this report I have also included examples in which the public health service was called upon to face *disasters*—firstly the disaster of war ; an account is given of those A.R.P. Services which were the concern of the Health Department. Secondly, in September, 1946, the River Irwell (living up to its Celtic name of " the winding torrent ") caused the severe flooding, so well known to you.

I wish to record appreciation of the help and consideration which you, Mr. Chairman, Ladies and Gentlemen, have given to the work of the Health Department.

I should like to pay sincere tribute to the devoted service given by the staff during a busy year.

I am,

Your obedient servant,

J. L. Burn

Medical Officer of Health
and School Health Officer.

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STATISTICAL SUMMARY, 1946.

Area.—The City of Salford has a total area of 5,202 acres.

Population.—(Registrar-General's Estimate at Mid-year, 1946)	169,470
,, (Census, 1931)	223,438

Density.—The Mean Density of the City is equal to 32·6 persons per acre.

Live Births	**Legitimate**	**1,818 Males,**	**1,792 Females**	3,610
	Illegitimate	**121 ,,**	**118 ,,**	239
			Total	3,849

Annual Rate of Births per 1,000 of the Population			22·7
Still Births	**Males**	63	
	Females	40	**Total** 103
Annual Rate of Still Births per 1,000 Total Births			26·0
Deaths	**Males**	1,162	
	Females	1,100	2,262
Annual Rate of Mortality per 1,000 of the Population			13·3
Percentage of total deaths occurring in Public Institutions			48·0 per cent.

Deaths from Puerperal Causes :—	Deaths.	Rate per 1,000 Total Births.
Puerperal Sepsis	1	0·25
Other Puerperal Causes	10	2·53
Total	11	2·78

Death-rate of Infants under one year of age per 1,000 live births :—

Legitimate, 50. Illegitimate, 104. Total	53
Deaths from Measles (all ages)	1
,, ,, **Whooping Cough** (all ages)	5
,, ,, **Diarrhoea** (under 2 years of age)	37

TABLE M. 4.

Showing the Births in the City of Salford, Deaths of Legitimate and Illegitimate Infants under One Year old and the proportion of Deaths under One Year of age per 1,000 Births during the Years 1938 to 1946.

Years.	Births.			Percentage of Illegitimate Births to Total Births.	Deaths under One Year.			Porportion of Deaths under One Year per 1,000 Births.		
	Total.	Legit.	Illegit.		Total.	Legit.	Illegit.	Total.	Legit.	Illegit.
38	3145	3037	108	3·4	233	213	20	74	70	185
39	2925	2808	117	4·0	202	194	8	69	69	68
40	2884	2742	142	4·9	219	209	10	76	75	70
41	2518	2377	141	5·5	240	215	25	96	90	177
42	2823	2632	191	6·8	217	203	14	77	77	73
43	3085	2863	222	7·2	214	203	11	69	71	50
44	3251	3025	226	7·0	202	182	20	62	63	88
45	3022	2749	273	9·0	183	168	15	61	61	55
46	3849	3610	239	6·2	205	180	25	53	50	104

TABLE M. 5.

howing the Birth-rates, also Rates of Mortality from all Causes, from the Seven Principal Zymotic Diseases, and from Tuberculosis of Respiratory System, Cancer, Nervous Diseases, Heart Diseases, Bronchitis, Pneumonia and the Infant Mortality Rate during the Years 1938 to 1946.

ears.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Tuberculosis of Respiratory System.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
38 ...	199,400	15·8	13·1	0·3	0·9	1·7	0·8	2·8	0·6	1·0	74	...
39 ...	196,600	14·9	14·3	0·2	0·9	1·8	0·7	3·8	0·7	1·0	69	...
40 ...	173,200†	16·6	19·1	0·3	1·1	2·0	1·1	5·3	1·7	1·2	76	...
41 ...	159,720†	15·8	16·8	0·4	1·1	1·7	1·1	4·3	1·1	1·2	96	...
42 ...	153,300†	18·4	14·5	0·4	0·9	2·2	1·0	3·4	0·9	0·8	77	...
verage 5 years		**16·3**	**15·6**	**0·3**	**1·0**	**1·9**	**0·9**	**3·9**	**1·0**	**1·0**	78	...
43 ...	153,000†	20·2	15·7	0·3	1·0	2·2	0·9	2·7	1·9	0·9	69	...
44 ...	155,810†	20·9	14·6	0·4	0·9	2·1	0·9	2·4	1·9	0·6	62	...
45 ...	157,300†	19·2	15·5	0·2	0·9	2·0	0·8	2·2	2·9	0·8	61	...
46 ...	169470	22·7	13·3	0·2	0·8	1·9	0·9	1·8	2·0	0·6	53	...

† Civil population.

SANITARY CIRCUMSTANCES AND ADMINISTRATION.

The following are the outstanding features of the year's work :—

Housing.

It must, unfortunately, be recorded that Salford's housing position at the close of 1946 is deplorable.

Of the 50,000 houses sheltering the City's inhabitants there is a very large proportion of late eighteenth century and nineteenth century property, badly built, ill-equipped and worn out, which adversely affects the physiological and psychological welfare of the community.

There are 9,655 houses scheduled for clearance at the earliest possible moment and after these, the worst of the slums have been eliminated, there are a further 10,000 houses earmarked as ripening for demolition in a second reconstruction programme.

In these days of serious housing shortage demolition of even the meanest of the slum houses would prove a futile proceeding. During this year, in only 25 cases have the Council invoked the demolition powers contained in Part 2 of the Housing Act ; the 25 houses concerned were dangerous and insanitary and beyond the possibility of a further lease of life.

The progress made during the year in the erection of new houses, viz. :—

	Permanent.	*Temporary.*
Erected by private enterprise	51	—
Erected by Local Authority................	46	46

giving a total of 143 new houses, has made small impression upon the shortage of accommodation in the City.

There are still very many Salford houses shared by two or more families and in the majority of such cases young married couples live uncomfortably with parent families. This position is illustrated by reference ot items Class 2, Class 3 (*a*) and Class 3 (*b*) in the table " Housing Priority " included in this report.

The total number of applicants for Corporation-owned houses on the Council's Register at December, 1946, was 9,221 and I have certified 1,671 of these as cases meriting urgent priority.

Until this state of affairs can be remedied there is no alternative to the retention in use of every available house irrespective of conditions of unfitness. It has become apparent that endeavour must be made to make the most of all available shelter even though the policy of demanding repair of houses already completely worn out is unsatisfactory and uneconomic.

In pursuing this policy very considerable difficulties have arisen.

In the first place, the fabric of old jerry-built houses cannot easily be maintained in reasonably habitable condition and it must be remembered that dilapidations were aggravated by disturbance caused by enemy bombs. The remedy of one defect generally causes other defects to become manifest; the Sanitary Inspector is inundated with repeat complaints.

Maintenance of such property would prove difficult in normal times but with building materials for repair of existing houses being in short supply the effort to remedy or ameliorate insanitary conditions to-day presents a much more serious problem.

The following figures however show the effort made in Salford to cope with the present situation, an effort which has taxed to the full the time of the Department's Inspectorate and the material resources of the local building trade :—

Complaints received in 1946	11,385
Notices (Public Health Act) issued	10,757
Notices complied with	7,414

Although this gloomy picture of housing conditions in Salford is a source of anxiety, improvement of general post-war conditions, which will enable large-scale reconstruction to be commenced, is looked forward to.

Housing Priority.

To enable the Housing Manager to assess the priority of applicants for the tenancies of Corporation houses, inspections have been made by the Sanitary Inspectors of the conditions under which the applicants were living.

Priority has been divided into three classes as follows :—

Class 1. (*a*) Where the applicant, or a member of the applicant's family, suffers from tuberculosis and there is insufficient accommodation for the patient to have a separate bedroom.

Class 1. (*b*) Where the applicant is living in a house unfit for habitation.

Class 2. Overcrowded.

Class 3. (*a*) Accommodation insufficient to allow proper separation of the sexes.

Class 3. (*b*) Bedroom accommodation insufficient.

The following certificates were issued during the year :—

Class 1. (*a*)	118.
Class 1. (*b*)	14.
Class 2.	364.
Class 3. (*a*)	436.
Class 3. (*b*)	375,

Sublet Houses.

A sublet house is defined as " a house or part of a house intended or used for occupation by the working classes and let in lodgings or occupied by members of more than one family."

There are 270 such premises appearing on the local authority's register but this can be no indication of the true position. There must be hundreds of houses which come within the above definition and are unknown to the local authority. The fact is that there is no legal obligation to notify the local authority when a house is sublet and powers are being sought to make it compulsory for houses to be registered for this purpose before they are so used.

The advantage of this procedure to the local authority is obvious as proper domestic amenities for each family could be demanded before registration is granted and a complete record of every house could be kept.

Conditions in sublet houses are the true measure of the general housing situation. Even the worst type of family only resorts to a sublet house in the last extreme. At the present time practically every sublet house in the City is full to capacity and the conditions under which the occupants are existing, it can only be a mere existence, are terrible to contemplate.

Anyone who has had any dealings with the " typical sublet " knows the sheer hopelessness of ever trying to change its condition or of transforming the lives of its occupants once the sublet condition is established. Driven as far as legal power can drive it, it will close down before it will change its character and impose still further hardship on the homeless ejects. In fact it is useless driving until there is something better to drive to.

All this is not to say that nothing can be done or is being done here and now. A little help never goes amiss whether from a public health official or any other source.

The enormity of the problem, however, demands more than a little help and among the many problems facing us to-day there is none more urgent than the rehousing and re-education of the " sublet family."

Seamen's and Common Lodging Houses.

In contra-distinction to sublet houses the trend in Seamen's and Common Lodging Houses is towards better conditions.

Such premises are now largely used by merchant seamen and labourers who are away from home and the vagrants who formerly lodged in these places have almost disappeared. Economic conditions are responsible for this happening and it is fortunate from the public health point of view that the present users are demanding better accommodation than their predecessors.

There is a marked tendency on the part of merchant seamen to seek accommodation at the large institutional houses where meals and recreation can be obtained. A similar tendency is also noticeable in the Common Lodging Houses. The Corporation Lodging House which provides separate sleeping cubicles and other desirable amenities is full to capacity almost every night. D.D.T. has also worked wonders with the bug-ridden lodging house and made life a little more tolerable for the " paying lodgers."

There is still much to be done, however, before the public health authority can be satisfied with this type of accommodation.

At the present time there are 10 Seamen's Lodging Houses and 5 Common Lodging Houses in the City.

Disinfestation of Verminous Premises and Persons.

The municipal disinfestation service which was inaugurated in 1945 has functioned busily throughout the year.

The insecticides used, which have given highly successful results are D.D.T. and Gammexane ; both products have been exploited in various forms, viz. :— spray solutions and dusting powders. Two men have been employed full-time ; spraying and dusting equipment and a vehicle are maintained.

The following are the details of the year's disinfestation work, viz. :—

Insect Attacked.	*No. of Premises Treated.*
Bedbug	745
Cockroach (Oriental and German)	190
Housefly and bluebottle	98
Body louse	24
Flea	25
Cricket	7
Silver fish	3
Clothes moth	2
Beetles in food	2
Furniture beetle	8
Book louse	1
Total	1,105

In addition two cast swarms of bees were dealt with.

Type of Premises Treated.	*Number.*
Corporation houses	336
Corporation flats	151
Removals into Corporation dwellings (furniture and new premises)	18
Privately owned dwellings—	
Landlords' orders	246
Tenants' orders	130
Without order as urgent P.H. measure	17
Canteens, kitchens and feeding centres	44
Restaurants	2
Hostels	2
Food store	1
Bakehouse	1
Nurseries	12
Clinics	5
Animal clinics	1
Public offices and waiting rooms	5
Other offices	1
Factories	7
Brokers' shops	1
Clothing store	1
Libraries and reading rooms	7
Fire stations	2
Common lodging house	1
Stables	3
Mortuary	1
Visits to hospitals	45
In addition—Verminous persons treated at their homes	7
Casual callers at Department for cleansing, body and clothing	3

The above tables do not include details of the disinfestation work carried out after the serious flood which occurred in Salford at the end of September, 1946, when in a three weeks' period 807 houses and a school used as a Reception Centre were treated as a precautionary measure.

The existence of the service is well known as also is the excellence of results obtained. Orders flow in from landlords, many repeat orders for other properties ; occupiers call at the Office to request treatment ; District Sanitary Inspectors in routine inspection or on complaint discover insect-infested premises and serve notices to which order forms are attached. It has never been necessary to invoke the law in Sections 83 and 84 of the P.H.A., 1936.

A signed order from owner or occupier is obtained for every job unless the matter is one of urgency in the interests of public health.

Accounts based on actual cost of operations are prepared in the Department and collection is made by the City Treasurer.

The service has been financially self-supporting ; expenditure for materials, equipment, wages and transport totalled £1,084 11s. 3d. and accounts rendered totalled £1,094 2s. 7d.

One further item of probable interest :—In the large number of movements of families for the first occupation of new houses, in particular the prefabricated types, it has proved a sound practice to spray furniture at the old address some days before removal and to spray treat the newly decorated interiors of the new dwellings, as a precautionary measure against bug infestation in the new property.

It has proved practicable to charge the cost of the work to the selected tenant, at the handing over of keys.

In the case of a new estate comprising 65 concrete houses it appeared that for practical reasons connected with the method of plastering which had been adopted, and with a view to further research, it would be a sound plan to try out D.D.T. incorporated in the water paint applied for interior decoration.

Arrangements were made accordingly, and the sub-contractor was supplied with 90 1-lb. packets of 33 per cent. D.D.T. Wettable Powder, with instructions for mix. The houses so treated are being completed and occupied at the present time, and observations made throughout the coming Summer season should prove interesting.

Smoke Abatement.

The optimistic outlook portrayed in last year's report has not materialised so far, for since then the fuel situation has deteriorated steadily, as everyone is aware, and black smoke emission from industrial undertakings appears to be accepted as a necessary part of our economic difficulties, whereas in fact, the opposite view should be taken. It has been proved over and over again that black smoke is the result of wasteful use of fuel, and it is still an offence under the Public Health legislation of this country for black smoke to be emitted irrespective of difficulties of supply, for even low-grade fuels can and should be burned without the creation of large volumes of black smoke.

Difficulty in the supply of materials for new installations and plant improvements have become even more acute with the result that many firms desirous of changing over to oil fuel are unable to do so, and one firm scheduled to commence operations on oil fuel in February will not be able to do so for at least another seven or eight months.

Smoke abatement activities are not at a standstill however.

The proposal referred to in last year's report to construct a modern power house in the Higher Broughton district has been accepted by the firm concerned and preparatory work has already commenced. One large industrial undertaking in the City whose chimney has been a constant source of trouble for years, has extended and modernised a section of its boiler-plant since the last report and its chimney is now practically smokeless.

The courses of instruction for boiler-firemen, suspended during the war years, have recommenced and the number desirous of attending is greater than can be accommodated.

In the domestic field, Salford has instituted a scheme whereby tenants of new houses with specially designed smokeless fuel-burning firegrates are given priority in the supply of coke. They do not of course receive any coal allocation.

Staff difficulties have rendered it imperative for smoke abatement activities to be restricted, and consequently less care appears to be taken in controlling the emission of black smoke.

Statistical reports have been submitted to the Health Committee monthly. The tabulated figures below are the totals for the year :—

	Totals.	
	1946.	1945.
Total number of observations made	289	399
Black smoke emissions up to one minute	33	68
,, ,, ,, from one to two minutes	38	29
,, ,, ,, from two to three minutes	9	15
,, ,, ,, over three minutes	29	28
Total minutes black smoke observed	358·5	343·0
Average minutes black smoke per observation	1·24	·86
Abatement Notices authorised	3	8
Number of intimations served	40	46
,, cautionary letters sent	3	5
,, cautions to firemen	33	27
,, advisory visits made	28	36

Safe Milk Campaign.

The time was considered opportune for an all-out drive towards 100 per cent. safety of the milk supply. Safety from diseases of the cow transmissible to man can only be attained through efficient heat-treatment of milk and to this end the campaign was directed.

Film shows, demonstrations, and lectures were arranged during the first week in April and every section of the milk trade and the general public were invited. An exhibition and tours of a modern dairy were also arranged and were well attended. The exhibition was later transported to some of the senior schools and talks on "safe milk" were given to the children.

Throughout the campaign there was not one dissentient note against heat-treatment and apparently most of the early prejudice has been overcome. To give purpose to this effort resolutions were passed by the Council requesting the Minister of Food to declare Salford " a specified area " for the compulsory heat-treatment of all " undesignated milk " in accordance with Regulation 55G of the Defence (General) Regulations, 1939, and, also, that consideration should be given to the inclusion of Accredited and Tuberculin Tested Milk within the scope of the provisions for the compulsory heat-treatment of milk.

At the present time about 95 per cent. of Salford's milk supply is heat-treated but we shall not be satisfied until we attain 100 per cent.

Survey of School Milk Supplies.

An intensive survey of school milk supplies was made in July.

All the schools in the City were visited by the Food Inspectors and the head teachers of 127 school departments were interviewed.

Complaints were invited regarding dirty bottles or churns, sour or dirty milk, flies or other foreign bodies in milk, late deliveries, milk deposited at the school gate, irregular collection of empties, filling bottles in the streets, supplying loose milk, etc. Forty-one samples were taken during the survey and submitted for the methylene blue and phosphatase tests. Twenty-seven of these failed the methylene blue test and eight the phosphatase test. These unsatisfactory results are not, however, indicative of the general position as efforts were naturally concentrated on the worst suppliers.

Unsatisfactory test results and complaints from head teachers were taken up with the suppliers concerned and a general improvement effected. In three instances continued complaints were received regarding delivery of milk in dirty bottles and permission was obtained of the Ministry of Food to have the supply changed.

School milk supplies are sampled each week as a matter of routine, but an intensive survey of this kind where the teaching staffs are interviewed often brings to light defects which otherwise would pass without notice.

Ice Cream Survey.

Ice Cream reappeared on the market after a long absence. It was therefore decided to make a survey of all manufacturers in the City to ascertain the suitability of premises and conditions of manufacture in general. Ice Cream premises in the City may be divided into two classes :—

1. Shops in which Ice Cream is manufactured and sold over the counter, or received and sold prepacked.
2. Sheds or rooms where Ice Cream is manufactured for sale from vehicles.

Shop facilities are, in general, satisfactory. Patent freezers are usually installed and the domestic facilities for making the mix, washing of hands and cleansing utensils are as a rule satisfactory. There are 45 such premises in the City.

Shed facilities on the other hand are far from satisfactory. Sheds in back yards are generally ill-constructed and lacking in hygienic facilities such as a constant supply of hot water, proper storage, adequate lighting, etc. There are six such premises in the City of fairly long standing and steps are being taken to bring them up to standard. Failure to reach the required standard within a reasonable period will be reported to the Committee with a view to their being struck off the register. The Food and Drugs Act, 1938, has been particularly useful with regard to Ice Cream premises, making it necessary to obtain prior approval and registration before commencing business. All new premises must be of good standard and the back-yard shed will rapidly become a thing of the past. Fortunately the sheds in Salford are few in number and not by any means the worst of their type. They were all in existence before the advent of the Food and Drugs Act, 1938, and since then Ice Cream has been off the market for a considerable time.

Ice Cream Mixtures divide themselves roughly into three classes :—

1. Complete Mix Powders made at a factory by evaporating down a liquid mix which has already been subjected to efficient heat treatment and needs only the addition of water to make Ice Cream. Such mixes are supplied to the Ice Cream Manufacturer in air-tight containers.
2. Mix Powders which require the addition of sugar, or fat, or some other ingredient.
3. Special Mixes made by the Italians and others who use recipes of their own.

At one time it was general practice to boil all mixes prior to freezing them but with the introduction of patent freezers for shops and the necessary measures for fuel economy the practice of boiling the " mixes " fell into disuse. An outbreak of food poisoning at a Salford school in June, 1945, focussed attention on this point and as a result of numerous tests and experiments with a typical mix, efficient heat-treatment of all mixes prior to freezing was strongly advocated and the point was taken up with the Ministry of Food and the Ministry of Health. Since that time the Ministry of Health have issued Draft (Heat Treatment) Regulations which will come into force in May, 1947. The Regulations recognise a cold mix where a " complete cold mix " is used which only requires the addition of water, and is supplied to Ice Cream manufacturers in air-tight containers. All other mixes must be subjected to heat treatment and cooling and storage conditions as prescribed in the Regulations.

This is a first step and a very commendable one, but there are many technical and practical difficulties in the way of its application. Bacterial contamination, of course, is the cause of most outbreaks of illness in connection with Ice Cream but at the present time there is no satisfactory test for bacterial contamination. The Ministry of Health are endeavouring to devise such a test but it is not yet perfected. Another difficulty is that there is no test for efficient heat treatment of Ice Cream. The proposed new Regulations if brought into being would necessitate the immediate installation of thousands of temperature recorders, coolers, refrigerators and other equipment which are not available. Nevertheless it is better to make a start than to do nothing at all and the application of the principle of heat treatment together with the enforcement of scrupulous hygienic measures which are enforceable under the Food and Drugs Act, and which have been the primary object of this survey, should minimise such outbreaks of disease as that which happened recently at Aberystwyth.

At the present time there are 17 manufacturers in the City making a cold mix, 28 making a hot mix, and seven making both hot and cold. Nearly all those making a cold mix would be required to apply heat treatment under the proposed Regulations.

Distribution. Over-counter sales in shops are fairly satisfactory but the sale of Ice Cream from open vehicles should be abolished unless the Ice Cream is prepacked under hygienic conditions. As with the wrapping of bread, however, the time is not opportune to press this matter until sufficient quantities of paper are available.

A step which could be taken and has already been recommended for inclusion in the proposed Salford Bill is that Ice Cream vehicles should be covered on top and screened on three sides as a protection from dust and rain. This measure, however, whilst it may afford some protection could never be a substitute for prepacking as it is impracticable to carry proper washing facilities and the means of sterilising utensils on Ice Cream vehicles.

Ice Cream Handlers. Medical histories of all persons handling ice cream in the City were taken and all were satisfactory.

Plan for Public Conveniences.

It is well recognised that the City's public conveniences are inadequate and in many cases inconveniently situated and not in keeping with modern requirements as to design.

A plan has therefore been drawn up which caters for the erection of 17 new conveniences and the demolition of six obsolete conveniences. It is recommended that all new conveniences should be above ground, fronting the main thoroughfares, easy of access and easily seen, the accommodation for men and women to be arranged on the same site where possible, and the accommodation for men to include water closets as well as urinal stalls. Washing facilities to be provided only where there is special need, such as at the main bus termini. The adaptation of shop premises is to be considered wherever suitable particularly for women's conveniences.

The scheme has the approval of the Public Health Committee and plans, specifications, etc., are already in course of preparation for five conveniences which are most urgently needed.

The Flood.

It came on Friday, September 20th, and went the day after but it left behind the most urgent and concentrated mass of sanitary problems that has ever confronted this City.

Time only serves to reveal more and more the devastation which followed this deluge and it is impossible to record the damage and full extent of the work done.

Some 600 of the City's 5,202 acres were inundated and approximately 5,000 houses were affected. Two complete surveys of every house in the flooded area were carried out in quick succession by Sanitary Inspectors and later a representative proportion, 1,200 houses, were inspected to discover the extent of dampness, smells, fungi, and structural defects remaining after an interval of about four months. In this last survey 6 per cent. of the houses were still damp, 8 per cent. had sewage or musty odours and 1·5 per cent. were affected with fungi. It was impossible to give an estimate of structural defects as in most cases they were indistinguishable from defects which existed before the flood.

As previously stated it would be impossible to record the amount of work involved but the following brief outline written on 5th October, 1946, a fortnight after the happening, may serve to give some idea of the problems faced by the Sanitary Inspectors Department.

" ACTION TAKEN BY SANITARY INSPECTORS IN
" CONNECTION WITH THE RECENT FLOOD.

" *Food.* The first calls on the services of the Department were con-
" cerning contaminated foodstuffs. Food Inspectors were called out the
" first thing Saturday morning, 21st September, to examine and advise
" *re* contaminated foodstuffs and to issue certificates for replenishment of
" stocks at shops and warehouses.

" *Drainage.* As the flood subsided and the drainage system was again
" in evidence it became a matter of urgency to open choked gullies and
" drains. Calls for the Drainage Inspector and his men were incessant.

" *Action* re *Conditions in General.* It soon became apparent that
" the normal routine must be abandoned and on Monday, 23rd September,
" every Inspector was directed to the flood area to advise and report on
" conditions in general.

“ A quick survey was made of the whole area and people were advised
“ regarding the boiling of water, clearance of sludge and refuse, cleansing
“ and drying of bedding, cleansing and disinfection of premises, ventilation
“ of ground floor rooms and sub-floor cavities.

“ Appeals for help were made on behalf of necessitous cases and a
“ close liaison maintained with all other services.

“ *Detailed Investigation.* On Thursday, 26th September, a detailed
“ investigation of every house in the flooded area was commenced. Special
“ attention was focussed on damp conditions, cleansing of premises
“ and household effects, early signs of epidemic disease, rat and insect
“ infestation, help for special cases and structural defects caused by the
“ flood.

“ Unoccupied premises are presenting a difficult problem and in one
“ instance a warrant was obtained from the Stipendiary Magistrate to
“ enter a house, the tenants of which were in Ireland on holiday. The
“ house was cleansed and disinfected.

“ Landlords are being written regarding all flood damage to their
“ property and full support has been offered in obtaining materials to do
“ the necessary repairs.

“ In this connection it is considered a matter of urgency that an appeal
“ should be made by the Council for a special direction of building materials
“ to Salford in order to cope with flood damage. Plastering and timber
“ in particular are in great demand, and the demand is likely to increase.

“ *Special Services.* Emergency Services which have been instituted
“ by the Sanitary Inspectors' Department are :—

“ 1. Drying of bedding and clothing, etc., at Hope Hospital, and
“ disinfection at Ladywell Hospital Disinfecting Station.

“ 2. Supply of “ Izal ” disinfectant at the Public Health Department,
“ Carey Street Depot and Kersal Cell.

“ 3. Loan of stirrup pumps from the Public Health Department for
“ cleansing walls and floors.

“ 4. Supply of lime and loan of brushes, for purifying cellar and
“ basement walls, at Carey Street Depot.

“ 5. Free disinfestation service against all insect pests. D.D.T. is
“ being used and extensive spraying has been carried out on
“ infested land, house property and food stores.

" *Observations.*

" 1. Up to the present time there is no evidence of epidemic disease
" due to the flood and it is hoped that the strict hygienic pre-
" cautions which are being taken will avert any such happening.

" 2. There is need for a special allocation of building materials to
" this area to repair flood damage. It is recommended that the
" matter be brought to the notice of the Ministry of Supply.

" 3. The people appear to be making a quick recovery from what has
" been a great shock and a major disaster. Their resource and
" cheerfulness are beyond all praise.

" 5th October, 1946."

Fortunately epidemic disease did not occur. Whether this was due to applied sanitary principles, or good fortune, or both, it is impossible to say with certainty, but every effort was made to avert such an outbreak.

The flood itself was certainly a great shock and a major disaster the like of which we never wish to see again.

Staff, &c.

The Department has laboured under a serious staff shortage. The full establishment is 20 Sanitary Inspectors whereas at the present time there are only 13 to cope with an ever-widening field of activity.

The work is also fraught with difficulty for, as so often stated in recent years, shortages of materials and skilled labour are still great stumbling-blocks in the way of progress and there is no immediate prospect of an easing of the situation.

Statistics.

The following tables are included to give some idea of the nature and extent of the work carried out during the year and a comparison is made with last year's figures :—

Nature of Inspections.	*Totals.*	
	1946.	1945.
Sanitary Defects (roofs, gutters, drains, etc.) under Public Health Act and Housing Act	34,043	30,162
Housing Survey (Sec. 5)	—	210
Flood Survey	11,562	—
Inspections *re* Housing Applications	1,608	1,340
Inspections *re* Requisitioning of Houses	113	868
Sublet Houses	298	337

Seamen's Lodging Houses	74	68
Common Lodging Houses	54	21
Van Dwellings	72	—
Factories	65	73
Shops Act Inspections	52	35
Schools	124	131
Cinemas	35	21
Public Conveniences	596	625
Stables	29	15
Tips	6	2
School Milk Survey	148	—
Dairies	139	230
Milk Shops	160	491
Food Manufacturing Premises	27	42
Butchers' Shops	214	416
Fish and Chip Shops	35	52
Restaurants	2	10
School Meals Kitchens	12	83
Factory Canteens	28	17
Bakehouses	47	53
Ice Cream Shops	66	66
Public Houses	—	8
Ships *re* Importation of Dogs and Cats	13	14
Diseases of Animals Act Visits	25	40
Slaughterhouses and Knackers' Yards	23	17
Piggeries	7	57
Dysentery Cases	50	62
Smallpox Contacts	2	37
Food Poisoning	14	152
Unsound Food	543	257
Other Miscellaneous Visits	1,768	1,559
	52,054	37,571

List of Samples Taken.

Milk for T.B. Test	303	175
,, Phosphatase Test	285	205
,, Methylene Blue Test	231	205
,, Fats and Solids-not-fats, etc.	1,275	1,628
Fertiliser and Feeding Stuffs Act Samples	8	8
Pharmacy and Poisons Act Samples	9	5
Water Supply Samples	49	46
Swimming Bath Water Samples	151	84
	2,311	2,356

Complaints, Notices, Letters, etc.

Complaints Received	11,385	10,782
Statutory Notices Issued	6,034	3,951
,, ,, Abated	4,818	2,822
Intimation Notices Issued	4,723	3,064
,, ,, Abated	2,596	1,670
Letters Written	5,748	4,635
Priority Housing Certificates Granted	1,307	1,022

Cases Heard Before The Magistrate.

Offence.	No. of Cases.	Decision of Magistrate.
FOOD AND DRUGS ACT For selling milk containing extraneous water.	2	One fined £2 and £1 1s. 0d. costs. One fined £3 and £5 5s. 0d. costs.
PUBLIC HEALTH ACT For failing to comply with the requirements of Notices under Section 93 of the P.H.A., 1936, to remedy nuisances at dwellinghouses.	10	Orders made to abate the nuisances (in two cases with costs).
HOUSING ACT For failing to pay an account for repairs to dwellinghouses carried out by the Corporation under the Housing Act, 1936.	1	Judgment for the Corporation for the sum of £109 14s. 8d. and costs.

REPORT RE REPAIRS TO HOUSES, ETC.

Appended is a Report which has been submitted to the Special Committee appointed to deal with the question of repairs to houses, etc.

One glance at the map which shows the age of property in Salford is sufficient to convince one of the large and serious problem which confronts those anxious to take effective action. A large proportion of the houses of Salford are of considerable age—in point of fact, it is estimated that more than 35,000 were erected in the nineteenth century, the whole of which are unprovided with hot water systems, baths or food storage facilities. As the total number of houses in Salford does not greatly exceed 50,000, it will be appreciated at once that the problem in this area is very great.

Before the outbreak of war on 3rd September, 1939, some progress was being made in the demolition of slum clearance areas and the rehousing of persons so displaced in new property. Slum clearance should have taken place, of course, at a much greater speed before the war, but, as has been frequently pointed out in the past, the possibility and the rate of slum clearance in Salford has been restricted by lack of suitable land within the City's boundaries for rehousing purposes. It is obvious that however many slum clearance schemes are prepared (and many have been prepared in Salford) it would be worse than futile to demolish houses in which people are living, unless, and until alternative accommodation is available.

Prior to the war, in addition to slum clearance and rehousing schemes, extensive reconditioning and remodelling of properties was taking place under the Housing Act, 1936. Furthermore, little or no difficulty was experienced in securing compliance with Notices issued under the Public Health Acts.

The surveys carried out by the Department under Part IV of the Housing Act, 1936, showed that at the end of 1938 only 1,249 houses in the city were overcrowded, while during the same year 615 new houses had been built within the city by the Corporation and private enterprise—a fair proportion of which had been tenanted by Salford residents. In 1939 it could be anticipated with reason that, subject to the availability of sites for rebuilding, slum clearance and the relief of overcrowding would proceed apace ; while owing to the ample supply of building materials and labour available the remainder of the houses, even though of considerable age, could be kept in a reasonable state of repair, without undue difficulty or delay.

The outbreak of war caused an immediate and long-lasting interruption in all the activities referred to above. For example, on the direct instructions of the Ministry of Health, the demolition of houses under slum clearance schemes was entirely suspended ; as also was the reconditioning and remodelling of properties under the Housing Act. As with many others of the country's activities, repairs to property were limited by the man-power and supplies available. This restriction of repairs which increased gradually as the war continued would not have been felt so greatly had most of the houses been fairly new, but the considerable age of most of them made them deteriorate more rapidly as a result of enforced neglect.

By 1945, the full force of six years of gradually increasing deterioration was being felt, in addition to which a large number of houses were suffering from the effects of air raids.

As an example of the present state of the housing problem in this city I desire to point out that 9,655 houses which are unfit for habitation are included as a *first* instalment in proposed clearance areas, but until houses can be built in replacement it is quite impossible to make any progress with slum clearance schemes. These houses in themselves, representing approximately one-fifth of the dwelling-houses in the city, are a constant source of nuisance and complaint as they must, if possible, be kept in a habitable condition for the time being. The correct solution, of course, in the case of these houses would be, if means were possible, to erect new houses immediately and so obviate the continued expenditure of time and material upon repairing property which should be demolished at the earliest possible moment.

Since the end of the war the difficulties referred to above have been intensified by the reduction in the supply of building materials of all classes and by the shortage of skilled labour. At the present time there has been a slight but definite improvement in the labour position, but none in the supply of materials. I give below a list of some building materials which are in some short supply. This list has been compiled not from the statements of landlords but from official sources and from the written statements of merchants and property repairers, i.e., those whose interest it is to see as much property repair work is done as quickly as possible :—

Material.	*Waiting Period.*
Timber	Practically unobtainable.
Cement	Available in small quantities only.
Plaster	,, ,, ,, ,, ,,
Lime	,, ,, ,, ,, ,,
W.C. Basins " S " Traps	6 months.
Slates	4 months.
Gutters (Iron)	12 months.
Gutters (Asbestos)	9 months.
Downspouts (Iron)	12 months.
Downspouts (Asbestos)	9 months.
Soilpipes (Iron)	12 months.
Soilpipes (Asbestos)	9 months.
Copper Tubes	9 months.
Glass	15/18 months.

At this stage, I think it desirable that the Committee should be made aware that many months before public agitation as to repairs to property were commenced, I myself initiated action so as to bring to bear upon repairs to property the greatest possible proportion of the available resources of the Sanitary Inspectors' Department. For instance, specialised activities such as smoke abatement, inspections of factories and shops, etc., were to a considerable extent suspended, and the time so set free devoted to inspection of dwelling-houses.

The great increase in the work carried out in this connection was effected in spite of the additional work undertaken in connection with the flood which occurred in Broughton during September, 1946, a detailed inspection of over 5,000 houses was made, following which, considerable action was taken to bring about an improvement in the conditions under which the tenants were living. In addition to the initial inspection, much additional work was undertaken in making the new surveys and issuing Statutory Notices upon owners. Every Inspector was seconded to work in the flood area.

As in many other occupations, there has been during the war, and still is, a great shortage of qualified staff. Every effort is being made to recruit additional Sanitary Inspectors, but the fact remains that there is a nation-wide shortage of such men which cannot possibly be made good for some years. By the employment of Student Sanitary Inspectors and unqualified assistants, it is hoped to mitigate this shortage to a certain extent, but the maximum effort cannot be brought to bear until the full establishment of Sanitary Inspectors is employed.

Every effort has been made by the Health Department to deal with the situation which has been forced upon the city entirely as a result of the impact upon large numbers of aged and unfit houses and conditions created by the war.

It is necessary to warn members of the Committee that deterioration in property seems to be proceeding even more rapidly than hitherto. Any spell of bad weather such as the severe winter seems to have hastened perceptibly the process of deterioration and it is a common experience when an attempt is made to remedy one defect, the attempt itself causes further difficulties to arise and be revealed. The position therefore will get worse.

In my printed annual reports in previous years I have drawn attention to the housing problem. In 1943 I described the position " serious and urgent " ; in 1944 " a nightmare " ; and in 1945 " grim." With the present difficulties regarding materials I regard the fact that over 7,000 Notices were fully complied with in 1946, as a splendid achievement reflecting credit on the inspectorial staff. I would remind members of the Committee that in the case of each Notice a detailed inspection of the defect has to be made, and a procedure (of which I reported fully to the Health Committee in February, 1947) must be followed.

There is an impression that to serve Notices and see that they are complied with is a quick and easy matter. This is not so. I can say that we have at times exceeded the powers which Parliament has provided us with in our anxiety to get work done.

APPENDIX SUMMARY.

The following table shows a comparison of complaints received and notices issued and complied with in connection with repairs to dwelling-houses during the years 1938, 1945 and 1946.

	1938.	1945.	1946.
Complaints received	5,565	10,782	11,385
Notices issued	5,719	7,015	10,757
Notices complied with	*3,931	*4,492	*7,414

* The balance would be complied with in the following year.

Although more than 8,000 houses were repaired during 1946 as a result of notice, sanitary defects are constantly recurring owing to the fact that there exists a vast number of houses which are unfit for habitation and incapable of being rendered fit.

In addition to the 9,655 houses included in the first instalment of the slum clearance scheme there are 25,519 houses without hot water systems, baths or food storage facilities, and which are of an age varying between 50 and 100 years. Of these 25,519 houses approximately 60 per cent. are capable, with reasonable care and maintenance and improvement, of remaining fit for habitation for an indefinite period (at least 20 years). The other 40 per cent. are to be regarded as ripe for early demolition on account of age, decay and congestion and they comprise the properties (some 10,000 houses) frequently referred to as the second ten-year clearance programme. In the case of these houses also, constant inspection and inevitably numerous complaints will prove the need for a very large volume of works of repair and remedy of dangerous conditions.

There are 95 dwellinghouses without separate sanitary accommodation (Blackburns Buildings, Cranbourne Street, Arlington Street, Barn Street, etc.). In addition, there is a large number (over 1,000 families) in sublet houses sharing use of water closets, baths and water-taps.

The location of the houses included in the first instalment of slum clearance is :—

North Salford	2,874
South Salford................	4,448
West Salford	2,333
	9,655

TUBERCULOSIS DISPENSARY.

Annual Report for 1946.

During 1946 there was still an increase over the previous years, in the number of new cases referred to the chest clinics from General Medical Practitioners and other sources. The number of patients referred during 1946 being 1,317.

As in former years an appreciable proportion of cases referred to the clinics showed abnormality other than tuberculosis. By giving as much help as possible in diagnosis of this type of case one hopes to encourage practitioners to refer cases freely so that tubercle may be discovered in as early a stage as possible.

(*a*) Sputum Examinations.

Eight hundred and seventeen (817) samples of sputum were examined in 1946.

All sputum examinations desired by Medical Practitioners are made free of charge at the Municipal Pathological Laboratory and special sterile metal containers are provided for the collection of the specimens.

(*b*) Contacts.

In 1946, the Department continued to make a special effort to induce more contacts, especially children, to attend for examination, and were rewarded by a definite increase in these figures over the preceding years. A single contact examination is not considered sufficient ; three monthly examination is carried out on all contacts who can be induced to attend. One thousand, one hundred and forty (1,140) contact examinations were made during 1946. Six of these were found to be suffering from pulmonary tuberculosis, and one from non-pulmonary tuberculosis.

It will be seen that contact examination entails a large volume of work in proportion to the number of cases of tubercle found, but as tubercle is sometimes found at an early stage the work seems worth while.

(*c*) X-ray Examinations.

The X-ray equipment, consisting of a two-valve set, used chiefly for screening purposes, and a four-valve set, fitted with a Rotating Anode Tube, continue to give excellent service and the quality of the films is maintained at a high standard.

As in previous years a considerable number of pregnancy X-rays were taken for the Maternity and Child Welfare Department.

Five thousand, four hundred and thirty-four X-ray examinations were made during 1946.

(*d*) Treatment by Artificial Pneumothorax.

This method of treatment has been carried out in all cases where it was considered that benefit could possibly accrue. There have been several very successful examples of bilateral artificial pneumothorax.

Analysis of Cases given Artificial Pneumothorax Treatment.

During 1946, thirty-seven (37) new cases commenced treatment by artificial pneumothorax, fourteen (14) at Ladywell Hospital, and twenty-three (23) at Nab Top Sanatorium, forty-six (46) patients continued their refills at the Dispensary, seventeen (17) of whom are working with completely quiescent disease. The number of artificial pneumothorax refills carried out at the Dispensary, Ladywell Hospital and Nab Top Sanatorium during 1946, was as follows :—

Tuberculosis Dispensary	1,084
Nab Top Sanatorium	459
Ladywell Hospital	127
	1,670

(*e*) Thoracic Surgery.

During the year Mr. Graham Bryce continued to give his valuable aid as consulting Thoracic Surgeon, making monthly visits to Nab Top Sanatorium and Ladywell Hospital. In addition to his help in the surgery of tuberculosis, he has been good enough to expedite the treatment of non-tuberculous chest cases.

(*f*) Non-pulmonary Tuberculosis.

The total number of primary and informal notifications of non-pulmonary or surgical tuberculosis received during 1946 was fifty-one (51), twenty-six adults and twenty-five children of school age. These are made up of cases suffering from glands, bones, joints, abdomen, meninges and other forms. Many of these patients are not seen at the Dispensary for the first time as they are often sent direct by the General Medical Practitioners to the local hospitals for diagnosis and treatment. Others, of course, are sent in the first instance to the Dispensary by General Practitioners, and in the case of children some are referred by the School Medical Officers.

Cases requiring surgical treatment are usually sent by the Dispensary Medical Officers to the Municipal Hospital, in some instances, having already been seen by Salford Royal Hospital. Where sanatorium treatment is likely to be of benefit the patients are sent by the Tuberculosis Officers, at the request of the Hospital Medical Officers, to Nab Top Sanatorium. When considered suitable, patients are referred for treatment at the Artificial Sunlight Clinic.

(*g*) Treatment of Tuberculous Skin Diseases.

Special arrangements have been made with the Manchester and Salford Hospital for Skin Diseases for the treatment of lupus. During the year treatment of tuberculous skin lesions by Vitamin D2 has been carried out at the Manchester Skin Hospital. The results are highly promising ; several marked cases of lupus, of many years standing, have shown striking improvement.

The number of visits paid by patients to the Skin Hospital for treatment during 1946 was one hundred and eight-three (183), and the total number of tuberculous skin patients treated was fifteen (15).

All suitable cases are treated at our own Artificial Sunlight Clinic. In this way many patients, who had previously been treated at the Manchester and Salford Hospital for Skin Diseases, now attend our own Sunlight Clinic where the treatment is carried out at a much cheaper rate. During 1946, thirty-nine (39) patients have received treatment at the Sunlight Clinic with a total number of attendances of one thousand, one hundred and fourteen (1,114).

TABLE 1.

Summary of Work done at the Tuberculosis Dispensary in 1946.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A. New cases examined during the year—												
(*a*) Definitely tuberculous	119	72	6	4	3	14	5	4	122	86	11	8
(*b*) Doubtfully tuberculous	...	...	...	...	...	...	...	...	26	15	4	2
(*c*) Non-tuberculous	...	...	...	...	...	...	...	...	439	451	84	69
B. Contacts examined during the year—												
(*a*) Definitely tuberculous	3	2	...	1	...	...	...	1	3	2	...	2
(*b*) Doubtfully tuberculous	...	...	...	...	...	...	...	...	...	...	...	...
(*c*) Non-tuberculous	...	...	...	...	...	...	...	...	85	161	112	100
C. Cases written off Dispensary Register as—												
(*a*) Recovered	11	8	...	...	3	5	4	3	14	13	4	3
(*b*) Diagnosis not confirmed or non-tuberculous	...	...	...	...	...	...	...	...	524	612	196	169
D. Number of persons on Dispensary Register on December 31st—												
(*a*) Diagnosis completed	440	355	33	27	26	46	58	35	466	401	91	62
(*b*) Diagnosis not completed	...	...	...	...	...	...	...	...	26	15	4	2

1. No. of persons on Dispensary Register on January 1st	974
2. No. of patients transferred from other areas and "lost sight of" cases returned	49
3. No. of patients transferred to other areas and cases "lost sight of"	88
4. Died during the year (Dispensary cases)	115
5. No. of attendances at Dispensary (including contacts)	5992
6. No. of consultations with medical practitioners—	
(*a*) Other	1035
7. No. of visits by Tuberculosis Officers to homes	44
8. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes	3103
9. No. of—	
(*a*) Specimens of sputum &c., examined	820
(*b*) X-ray examinations made in connection with Dispensary work	5434
10. No. of "TB plus" cases on Dispensary Register on December 31st	378
11. No. of insured persons under Domiciliary treatment on December 31st	702
12. No. of " Recovered cases " restored to Dispensary Register	1

TABLE 2.

SHOWING PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH IN FATAL CASES OF PULMONARY TUBERCULOSIS.

	Number.	Per-centage
Not notified before death	6	4·68
Notified within three months of death	29	22·66
,, from three months to one year before death	25	19·53
,, from one year to two years before death	23	17·97
Over two years	45	35·16

Total number of deaths, 128.

Ratio of non-notified cases to total fatal cases, 6—128.

TABLE 3.

NEW CASES AND MORTALITY DURING 1946.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0	...	...	...	1	...	...	1	1
1	1	3	3	1	...	...	1	...
5	3	1	6	5	...	...	1	2
10	4	3	4	5	...	1	...	1
15	10	16	2	9	...	8	...	...
20	13	23	1	3	6	7	1	1
25	28	22	3	1	6	20	...	...
35	28	17	1	3	15	8	...	...
45	29	14	...	1	27	3	1	...
55	26	2	1	1	16	5	...	...
65 and upwards	9	...	...	...	6	...	...	...
TOTALS	151	101	21	30	76	52	5	5

TABLE 4.

OCCUPATIONS OF THE 252 CASES OF PULMONARY TUBERCULOSIS NOTIFIED.

MALES.

1.	Joiners, House Decorators and Building Trades	6
2.	Dockers	2
3.	Labourers and Navvies	19
4.	Clerks	4
5.	Railway Workers	2
6.	Makers of Wearing Apparel	4
7.	Timber Trade	2
8.	Mechanics and Engineering Workers	24
9.	Cotton Mill Workers	4
10.	Merchant Seamen	3
11.	Hair Dressers	2
12.	Firemen	2
13.	Armed Forces	16
14.	Motor Drivers	5
15.	Warehousemen	2
16.	Scholars	6
17.	Under 5 years	1
18.	Miscellaneous Occupations	22
19.	No Occupation	23
20.	Rubber Workers	2
	TOTAL	151

FEMALES.

1.	Clerks and Typists	7
2.	Makers of Wearing Apparel	4
3.	Machinists	1
4.	Cotton Workers	4
5.	Nurses	3
6.	Housewives	41
7.	Scholars	3
8.	Engineering Workers	4
9.	Domestics	2
10.	Ex-Armed Forces	2
11.	Under 5 years	3
12.	Miscellaneous	17
13.	No Occupation	10
	TOTAL	101

During the year 1946, 51 new notifications of non-pulmonary tuberculosis have been received.

The new cases of non-pulmonary tuberculosis notified are classified in the following table :—

	Glands.	Bones.	Abdomen.	Skin.	Meninges.	Other forms.	Totals.
Under 10 years	8	2	—	—	6	—	16
10 to 20 years	11	6	—	—	1	2	20
20 to 30 ,,	1	1	2	1	—	1	6
30 to 40 ,,	1	1	—	1	—	3	6
Over 40 ,,	—	2	—	—	1	—	3
TOTALS	21	12	2	2	8	6	51

NAB TOP SANATORIUM.

Annual Report for 1946.

As in the past Nab Top Sanatorium has been used for the treatment of early and intermediate cases of pulmonary tuberculosis. Owing to the fact, however, that Ladywell Hospital, due to shortage of staff, cannot accept their full complement of patients, we have admitted some advanced cases of pulmonary tuberculosis, who, although not likely to improve, were at least taken away from their homes, and the possibility of infecting other members of the household thus lessened. Some few cases of non-pulmonary tuberculosis have, however, been admitted on special orthopædic recommendation. At present there are only eight (8) beds in the institution for children, and as these are all in one Ward and the sexes have to be mixed only children up to the age of nine years can be admitted. There are no facilities, therefore, for admitting doubtfully tuberculous children, or delicate children who would benefit by removal from a household in which there is serious open infection.

During the year Occupational Therapy Classes were continued at the Nab Top Sanatorium and provided diversional therapy for the patients. The attendance at these classes was very satisfactory; there being an average attendance of 26 male and 12 female patients each session.

The classes are held Monday to Friday for adults, and as there is only one room available for this purpose, the lack of suitable accommodation proved a handicap. In order to overcome this difficulty the women attend in the morning and the men in the afternoon, while each Saturday the room is used by the children.

The ability to obtain materials has become increasingly difficult but leather work, rug making and embroidery proved the most popular crafts. Owing to the shortage of materials the work produced was both limited in quality and quantity but it is hoped that in the future, supplies will be more plentiful and thus enable the range of articles made to be appreciably extended.

During the year, a new portable X-ray set, to be used in conjunction with a vertical screening stand, has been installed. The results are satisfactory and vastly superior to those obtained on the old plant which had become quite inefficient.

The following tables give figures as to the work carried out at Nap Top Sanatorium during the year.

TABLE A—(Nab Top Sanatorium).

Showing the Number of Admissions, etc., and the Number of " Patient-days " during the Year 1946.

	Total Adults.		Children under 15.			Totals.		
	Males	Females	Males	Females	Both	Males	Females	Both
Number of Patients admitted prior to 1946 who remained in Sanatorium for some part of 1946	39	29	5	4	9	44	33	77
Number of " Patient days " in 1946 for patients admitted prior to 1946 who remained in Sanatorium for some part of 1946.................	3863	3896	891	406	1297	4754	4302	9056
Total admissions, 1946........	76	54	4	7	11	80	61	141
Total discharges and deaths, 1946	74	69	5	9	14	79	78	157
Number of "Patient-days" for persons admitted during 1946	9672	6965	525	697	1222	10197	7662	17859
Total number of " Patient-days " for 1946...............	13525	10861	1416	1103	2519	14951	11964	26915
Average number of patients in Sanatorium each day during 1946......	38·0	29·8	3·9	3·0	6·9	41·9	32·8	74·7

Note.—The term " Patient-days " represents the product of the number of patients and the number of days spent by those patients in the Sanatorium.

The following tables give figures as to the work carried out at Nab Top Sanatorium during the year.

TABLE B.—Patients Discharged from Nab Top Sanatorium during 1946.

	Condition at Time of Discharge.	Duration of Residential Treatment in Institution.											
		Under 3 Months, but exceeding 28 days.			3 to 6 Months.			6 to 12 Months.			Over 12 Months.		
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Pulmonary Tuberculosis	Quiescent............	...	...	...	5	1	...	5	9	1	...	...	...
	Not Quiescent......	15	6	1	25	25	2	15	17	2	4	1	...
	Died	1	1	...	...	1	...	...	1	...	...	2	...
	Totals	16	7	1	30	27	2	20	27	3	4	3	...
Non-Pulmonary Tuberculosis	Quiescent...........	...	...	...	...	...	1	...	...	...	...	...	...
	Not Quiescent......	...	...	...	...	...	2	1	...	...	...	...	3
	Died	...	...	...	...	...	...	...	1	...	...	...	...
	Totals	...	...	...	...	...	3	1	1	...	...	...	3
								Under 4 weeks.			Over 4 weeks.		
Observation for Purposes of Diagnosis	Tuberculosis........................							...	...	...	...	...	...
	Non-Tuberculous.................							...	...	...	...	...	...
	Doubtful............................							...	...	...	...	...	...

LADYWELL HOSPITAL (TUBERCULOSIS SECTION).

Annual Report for 1946.

The tuberculosis blocks at Ladywell Hospital are still used for the most part for advanced cases of pulmonary tuberculosis. Owing to the shortage of Nursing and Domestic staffs, now approximately only fifty (50) beds out of seventy-two (72) have been available. Even this reduced number has thrown a very considerable strain on the Nursing staffs concerned.

Several cases who would not consent to Nab Top Sanatorium have been admitted for a short time to Ladywell Hospital for induction of artificial pneumothorax, and a number of moderate or early cases of pulmonary tuberculosis accompanying pregnancy or illness of a non-tuberculous nature have been treated in the Ladywell Wards.

LADYWELL HOSPITAL.

Table showing the Number of Admissions, etc., and the Number of " Patient-days " for 1946.

Tuberculosis Cases.

	Males.	Females.	Totals.
Total Number of Admissions during 1946...	72	43	115
Number of Persons Admitted prior to 1946 who remained in Hospital for some part of 1946	21	21	42
Total Number of Discharges and Deaths during 1946	73	51	124
Patients in Hospital on the 31st December 1946	20	13	33
Number of " Patient-days " for Persons Admitted during 1946..........	6326	2717	9043
Number of " Patient-days " (in 1946) for Persons admitted prior to 1946 who remained in Hospital for some part of 1946	3627	3027	6654
Total Number of " Patient-days " for 1946	9953	5744	15697
Average Number of Patients in Hospital each day during 1946..........	27·4	15·6	43·0

Mass Miniature Radiography Scheme, Salford, 1946.

A summary of the findings at the examinations conducted during the year is appended:

	Males.	*Females.*	*Total.*
Total radiographed	2,079	2,454	4,533
Total passed on miniature film	1,904	2,309	4,213 = 92·94%
Total recalled for full-size film	175	145	320 = 7·06%
Total recalled for medical interview	83	67	150 = 3·09%

Those who were passed on the miniature film required no further action. The 320 who were recalled for a full-size film were those whose miniature film suggested some abnormality which was considered to require further investigation. An analysis of these is given in the following tables.

In the tables prepared under the Ministry of Health classifications it will be noticed that a larger number of cases appear under the headings 1, 11 and 21, as classified on miniature film. This is due to the fact that further experience has enabled this discrimination, and without resorting to the recall of individuals for the purpose of taking full-size films.

MASS MINIATURE RADIOGRAPHY—SALFORD, 1946.

The following are the statistical figures in connection with the Mass Miniature Radiography examinations carried out in the City during the year 1946:—

Ministry of Health Classification Number.	TITLE	Classified on miniature (35 mm.) film. (No further action)			Recalls for full size film.						Totals.
					Not followed by recall for medical interview or clinical examination (No further action)			Followed by recall for medical interview and clinical examination. Analysis appended.			
		Males	Females	Total	Males	Females	Total	Males	Females	Total	
1	Congenital abnormalities of bony thorax and lungs	6	11	17	...	3	3	...	...	...	20
2	Chronic bronchitis and emphysema	...	...	...	...	...	...	7	2	9	9
3	Pneumonia, lobar	...	...	...	...	...	...	2	...	2	2
4	Broncho-pneumonia (non-tuberculous) (including primary atypical)	...	...	...	...	...	...	...	...	...	...
5	Consolidation of unknown origin	...	...	...	...	...	...	1	...	1	1
6	Bronchiectasis	...	...	...	...	...	...	8	3	11	11
7	Pulmonary fibrosis (non-tuberculous, *e.g.*, post-pneumonic)	...	...	...	...	...	...	1	3	4	4
8	Pneumokoniosis (silicosis, asbestosis, coal-miner's pneumokoniosis)	...	...	...	...	...	...	1	...	1	1
9	Pneumokoniosis accompanied by tuberculosis	...	...	...	...	...	...	...	...	...	...
10	Basal fibrosis (*e.g.*, obliterated costo-phrenic angle and diaphragmatic tenting)	5	...	5	...	...	...	...	...	...	5
11	Pleural thickening	33	4	37	6	...	6	...	2	2	45
12	Pleural and interlobar effusion (non-tuberculous)	...	...	...	...	...	...	...	...	...	...
13	Spontaneous pneumothorax (non-tuberculous)	...	...	...	...	...	...	...	...	...	...
14	Intrathoracic new growth (mediastinal, pulmonary, bronchial and pleural, primary and secondary both benign and malignant)	...	...	...	...	...	...	3	2	5	5
15	Cardio-vascular lesions—congenital	...	...	...	...	...	...	...	1	1	1
16	Cardio-vascular lesions—acquired	...	...	...	...	...	...	11	17	28	28
17	Miscellaneous (including acquired conditions of ribs, abnormalities of the diaphragm, dextrocardia, dextrocardia with transposition of viscera, pulmonary mycosis, mediastinal effusions)	1	...	1	1	...	1	...	1	1	3

MASS MINIATURE RADIOGRAPHY—SALFORD, 1946—*Continued.*

Ministry of Health Classification Number.	TITLE	Classified on miniature (35 mm.) film. (No further action)			Recalls for full size film.						Totals.
					Not followed by recall for medical interview or clinical examination (No further action)			Followed by recall for medical interview and clinical examination. Analysis appended.			
		Males	Females	Total	Males	Females	Total	Males	Females	Total	
18	Missing repeat 35 m.m. film	1	3	4	..	...	...	...	...	...	4
19	Missing large films, i.e., failed to attend	...	...	...	5	9	14	...	...	...	14
20	Tuberculosis—active primary lesions, including epi-tuberculosis—										
	(*a*) With symptoms	...	...	...	...	...	...	...	..	...	...
	(*b*) Without symptoms	...	...	...	...	...	...	...	...	...	...
21	Tuberculosis—inactive primary lesions (*e.g.*, Ghon's focus and/or calcified gland)	10	23	33	5	3	8	2	...	2	43
22	Tuberculosis—active, post-primary unilateral										
	(*a*) With symptoms (previously known)	...	...	...	...	...	...	1	...	1	1
	(newly discovered)	...	...	...	...	...	...	2	2	4	4
	(*b*) Without symptoms (previously known)	...	...	...	...	...	...	...	...	...	...
	(newly discovered)	...	...	...	...	...	...	...	3	3	3
23	Tuberculosis—active, post-primary bilateral										
	(*a*) With symptoms (previously known)	...	...	...	...	...	...	...	...	...	...
	(newly discovered)	...	...	...	...	...	...	5	3	8	8
	(*b*) Without symptoms (previously known)	...	...	...	...	...	...	...	...	...	...
	(newly discovered)	...	...	...	...	...	...	...	1	1	1
24	Tuberculosis—inactive, post-primary—										
	(*a*) Previously known cases	...	...	...	...	...	...	2	1	3	3
	(*b*) Newly discovered cases	3	...	3	27	13	40	21	14	35	78
	Tuberculosis—doubtfully active, still under observation	...	...	...	...	...	...	6	1	7	7
25	Tuberculosis—pleural effusion	...	...	...	...	...	...	...	...	...	...
26	Tuberculosis—spontaneous pneumothorax and hydropneumothorax	...	...	...	...	...	...	...	...	...	...
30	Abscess of lung	...	...	...	...	...	...	...	...	...	...
	Passed as " normal "	1,845	2,263	4,113	48	50	98	10	6	16	4,227
	Failed to attend for clinical interview	...	...	...	...	...	...	...	5	5	5
	TOTALS	1,904	2,309	4,213	92	78	170	83	67	150	4,533

An analysis of the 64 cases of pulmonary tuberculosis recalled for clinical examination and interview by the Radiography Unit Medical Officer shows that :—

(*a*) In 17 instances the disease was regarded as being active, 11 of whom were resident in the Salford area, one was a previously known case.

The remaining 16 were newly discovered cases of whom 15 were advised to attend their private medical practitioners with a view to securing their reference to the individual residential area Tuberculosis Officer. With the consent of the person concerned, a special letter was sent in every instance, to the practitioner, giving particulars of the clinical and radiological findings, and asking that the case be referred. Only one of the 16 was unwilling to furnish the name and address of his medical practitioner, and, in consequence, no further action could be taken.

All the 15 so advised attended at Tuberculosis Clinics, 12 being recommended for institutional treatment. Eight availed themselves of this recommendation, but four declined admission and were, therefore, placed under supervision at the Clinics. Three were not considered to require institutional care, and were advised to keep under supervision at the Clinics.

Sputum was positive for tubercle bacilli in three instances, all of whom attended at Tuberculosis Clinics. Two were recommended for, and accepted, treatment in sanatorium, and one for supervision at the Clinics.

(*b*) In 40 instances the disease was regarded as being inactive, 25 of whom were resident in the Salford area. Of these 40, three were previously known cases. Nine were regarded as being inactive after the initial clinical examination by the Unit Medical Officer and 27 following further observation at the Tuberculosis Clinics. The remaining four failed to avail themselves of the advice given relative to their attendance for observation.

(*c*) In seven instances the activity of the disease was regarded as being doubtful and attendance at the Tuberculosis Clinics for observation was advised in the manner previously mentioned. In all such instances decisions will be notified to the Radiography Unit by the Tuberculosis Officers as, and when, they are made.

In the cases of other various diseases and abnormalities where, after the initial clinical examination by the Unit Medical Officer, treatment was considered to be indicated, the individual was advised to consult his private medical practitioner to whom was sent, with the patient's consent, a full report on the clinical and radiological findings.

TUBERCULOSIS ALMONER'S DEPARTMENT.

Annual Report for 1946.

The social work undertaken in connection with the Tuberculosis Department has been described at some length in the Annual Reports for 1944 and 1945.

The administration of the Government Scheme of allowances, visits to the Sanatoria, the issue of certificates for food priorities and visits to the patients' homes all continue to provide countless occasions for making contacts, not only with patients, but also with their relatives. Opportunity is thus afforded for the establishment of a sound understanding between the Staff of the Tuberculosis Department and those whom they serve. Patients have come to regard the Almoner's office as the place to which their troubles and difficulties can be brought and discussed. Whilst their problems are sometimes insoluble they are comforted and strengthened by the assurance that they are thoroughly understood and helped as much as willing service and the resources of the Scheme can assist them.

During 1946, 2,139 patients or their relatives have been interviewed and 273 visited.

The arrangements made in 1945 with the Public Assistance Department with regard to Tuberculosis patients in receipt of relief have continued and the patients have on many occasions expressed their gratitude for this consideration. The Public Assistance Department have also been most co-operative in arranging for the children of tuberculosis women patients to be cared for so that their mothers could accept the treatment offered.

As in the past two years the Council's Care Fund has been used to meet small and temporary financial difficulties, i.e., help to purchase blankets, shoes, spectacles, trusses, shirts, beds, payment for dental treatment, commercial training and the payment of gas and electricity accounts.

LADYWELL HOSPITAL.

Report for the Year 1946.

At the beginning of the year there were 127 patients in hospital ; these, with the 990 admitted during the year, made a total of 1,117 cases under treatment. Of this total, 952 were discharged, 71 died, and 94 were in hospital at the end of the year. The number of cases treated, 1,117, compares with 1,414 in 1945, and with 1,478·6, the average number of cases treated for the previous five years, 1941-1945.

The cases treated were as follows :—

Scarlet Fever	213
Mixed infections	11
Measles	32
Enteric Fever	—
Diphtheria	131
Erysipelas	42
Puerperal Fever	16
Tuberculosis	154
Other diseases	518
	1,117

The number of cases admitted from *Out-districts was 219 as compared with 297 in 1945. The daily average number of patients in 1946 was 103·8, the highest being 141 on 26th April, and the lowest 74 on 28th September. The daily average number of Out-district patients was 16·5 compared with 25·4 in 1945, and with 28·1 for the previous five years 1941-1945. Nine hundred and ninety patients were admitted during the year as compared with 1,265 in 1945 and with 1,341·2, the average for the previous five years 1941-1945.

* Eccles, Stretford, Urmston, Irlam, Manchester Port Sanitary Authority and Service patients.

The following summary shows the diagnosis of the cases before admission and after observation in hospital :—

	Diagnosis before admission.	*Diagnosis after observation.*
Scarlet Fever	196	185
Mixed infections	17	11
Measles	39	32
Enteric Fever	2	—
Diphtheria	219	94
Erysipelas	50	40
Puerperal Fever	17	16
Tuberculosis	115	112
Other diseases	335	500
	990	990

Mixed Diseases.—Nine of the patients discharged were found to be suffering from two distinct diseased as follows :—

Bronchitis and Enteritis	1
Scarlet Fever and Diphtheria	2
Scarlet Fever and Chicken Pox	2
Measles and Chicken Pox	1
Measles and Whooping Cough	1
Scarlet Fever and Impetigo	1
Whooping Cough and Scabies	1
	9

Deaths from Mixed Diseases.—There were two deaths :—

Girl aged 12 months : Gastro-enteritis and Broncho-pneumonia. In hospital one day.

Woman aged 43 years : Chicken Pox and Herpes Zoster. In hospital six days.

The average stay in hospital for all Mixed Diseases cases discharged well in 1946 was 36·0 days.

Cross Infection.—The same remarks as last year apply to the situation ; the old wards are out of date and the new cubicle block is proving its worth. What is really wanted is one of the old blocks being replaced by another 32-bed cubicle block.

Four hundred and eighty-nine cases were admitted into the two wards of the cubicle block during the year as against 487 last year.

One patient discharged in 1946 contracted another infection as follows :—

Sent in as :		*Secondary Infection :*	
Scarlet Fever	1	Diphtheria	1

Girl aged 12 years in hospital 54 days.

The average stay in hospital for all cases discharged well in 1946 was : for Scarlet Fever 29·3 days ; for mixed infections 31·7 days ; for Measles 17·2 days ; for Diphtheria 45·0 days ; for Erysipelas 19·1 days ; for Puerperal Fever 30·1 days ; for Tuberculosis 75·4 days ; for other diseases 23·6 days.

Deaths.—The total number of fatal cases in 1946 was 71, as follows :—

Scarlet Fever	1
Mixed infections	2
Diphtheria	3
Tuberculosis	45
Cancer of Lung	4
Cavernous sinus thrombosis	1
Cerebro-spinal-fever	1
Gastro-enteritis	7
Marasmus	1
Meningitis (pneumococcal)	1
Meningitis (tuberculous)	2
Pneumonia	2
Whooping Cough	1
	71

The average stay in hospital for all fatal cases excepting advanced Tuberculosis was 20·6 days. The average stay for advanced Tuberculosis cases was 103·6 days.

The daily average number of patients in hospital in 1946 was 103·8 as compared with 126·4 in 1945, and with 128·7 the daily average for the five years 1941-1945.

There were remaining in hospital on 31st December, 1946, 94 patients as compared with 127 last year. The cases remaining were : Scarlet Fever 13 ; Measles 10 ; Erysipelas 1 ; Diphtheria 4 ; Puerperal Fever 3 ; Tuberculosis 33 ; other diseases 30.

DETAILED INFORMATION ABOUT SOME DISEASES.

Scarlet Fever.

The number of cases admitted was 185 as against 311 in 1945. One hundred and ninety-six were certified as having Scarlet Fever but in 15 cases the diagnosis had to be revised ; in addition, two cases admitted as mixed infection (one as Diphtheria and one other diseases) proved to be Scarlet Fever. One hundred and ninety-nine cases were discharged well during the year as against 303 last year. There was one death from Scarlet Fever, a girl six years. Complications—acute pericarditis ; in hospital 18 hours. Penicillin and Scarlet Fever antitoxin both proved unsuccessful.

The type of the disease was mild. Scarlatinal antitoxin was given intramuscularly in 3,000-9,000 unit doses to all but the very mildest cases. In addition, some Sulphonamide was given invariably, and Penicillin whenever condition indicated. The more important complications were as follows :—

	Cases affected.	*Percentage of discharged cases.*
Adenitis and Abscess	5	2·51
Otorrhœa and Otitis Media	4	2·01

Other complications were as follows :—Abscess (neck) 2 ; Abscess (buttock) 1 ; Burns 1 ; Pyuria 1 ; Sudaminal rash (O.A.) 1 ; Rheumatism 1 ; Scalds 1 ; Serum rash 1 ; Tonsillitis 1 ; Septic finger 1 ; Scabies 1.

One case contracted another infection whilst in hospital—Diphtheria 1. One patient had an operation for acute mastoid.

The average stay in hospital for all cases discharged well was 29·3 days.

Six patients were immunised against Diphtheria, receiving two doses of A.P.T. ; in addition, two patients received one does of A.P.T. ; two patients received two doses of T.A.F. ; and one patient received one does of T.A.F.

Diphtheria.

Two hundred and nineteen cases were admitted certified as Diphtheria, but in 126 cases the diagnosis had to be revised, 110 proving to be Tonsillitis. In addition, a case certified as " septic tonsils " proved to be Diphtheria. In a large number (31) of the most severe cases, including fatal cases, part of the antitoxin was given intravenously, in some instances repeatedly ; also Sulphonamides and Penicillin.

There were three deaths from this disease, in hospital eight, six and one days.

Of the discharged cases, 109 were faucial, one faucial and laryngeal, one faucial and nasal, four nasal. There were also nine cases of bacteriological Diphtheria. Penicillin was used as a spray for carriers.

Faucial Diphtheria.

In 112 cases, including three fatal, the throat was affected.

Mild.—Forty-five cases were mild, the deposit on the throat being localised to the tonsils with little or no toxæmia. The average amount of serum given was 11,010 units. Five cases had antitoxin before admission.

Complications.—Acute Bronchitis 1 ; Otorrhœa 1 ; Tonsillitis 1 ; Rheumatic Fever 1.

Moderate.—In 17 cases the membrane was more extensive and was accompanied by toxæmia. The average amount of serum given was 32,340 units.

Complications.—Palatal and pharyngeal paralysis 1.

Severe.—Forty-seven cases, including three fatal, were of the severe type. The amount of serum given averaged 68,280 units to the cases discharged, and 180,000 to the fatal cases. One of the discharged cases received antitoxin before admission. One fatal case was given 300,000 units of Penicillin I.M.

Complications.—Cycloplegia 1 ; Furunculosis 1 ; Palatal paralysis 1 ; Palatal paresis 6 ; Circulatory paralysis 3.

Nasal Diphtheria.

There were two cases of a mild type, the average amount of serum given being 6,000 units, and two moderate cases averaged 30,000 units.

Complications.—Adenitis and Scabies 1.

Faucial and Nasal Diphtheria.

There was one mild case of this type, which received 60,000 units of antitoxin.

The following table summarises the site of membrane in the total clinical cases discharged or died :—

Site of Membrane.	Mild.		Moderate.		Severe.		Total.	
	Recovered	Died.	Recovered	Died.	Recovered	Died.	Recovered	Died.
Faucial	45	...	17	...	47	3	109	3
Laryngeal	...	...	...	...	...	...	...	...
Faucial and Laryngeal	1	...	...	...	...	...	1	...
Nasal	2	...	2	...	...	...	4	...
Faucial and Nasal	1	...	...	...	...	...	1	...
TOTALS	49	...	19	...	47	3	115	3

Diphtheritic Paralysis.—Eight or 6·95 per cent. of the clinical cases discharged had paralysis in one form or another whilst in hospital.

Complications.—Fifteen or 13·0 per cent. of the recovered cases developed one or more complications. This figure does not include serum rashes.

Fatality Rate.—Three or 3·52 per cent. of the clinical cases admitted proved fatal.

Antitoxin.—Six or 4·83 per cent. of the cases discharged had antitoxin before admission to hospital. The average amount of serum given in hospital in the recovered cases was 37,210 units and 180,000 units in the fatal cases. In addition, 31 cases including three fatal, had part of the serum injected intravenously.

Cross Infection.—No cases of cross infection occurred.

Average stay.—The average stay in hospital for all cases discharged well was 45·0 days, and for the fatal cases 5·0 days.

Puerperal Fever.

Seventeen cases were admitted under this diagnosis, but two proved to be Septic Abortion. One case of Scarlet Fever proved to be puerperal Sepsis. The 13 cases discharged were classified as follows :—

Puerperal Fever 3 ; Puerperal Sepsis 10. Average stay in hospital 30·1 days.

There were no fatal cases.

Complications in the discharged cases.—Phlegmasia alba dolens 2 ; Abscess (breast) 2.

There were 15 babies admitted with their mothers.

Erysipelas.

Fifty cases were admitted as Erysipelas during the year, but in 10 cases the diagnosis had to be revised, viz. :—Impetigo 1 ; Cavernous sinus thrombosis 1 ; Herpes Ophthalmicus 3 ; Eczema 1 ; Abscess 1 ; Sore Nose 1 ; Thrombosis 1 ; Dermatitis 1. The average stay in hospital for the discharged cases was 19·1 days. There were no fatal cases.

Complications.—Abscess 4 ; Relapse 6 ; Otorrhœa 1 ; Carbuncle (neck) 1 ; Varicose Ulcer 1 ; Fracture (right femur) O.A. 1.

Measles.

Thirty-nine cases were admitted during the year as Measles, but of these 1 proved to be a mixed infection ; 2 Erythema ; 3 Pneumonia ; 3 Coryza ; 1 Adenitis ; 1 Meningococcal Septicæmia ; 2 Streptococcal rash. In addition, 1 Scarlet Fever, 1 " other diseases " and 4 mixed infections proved to be Measles.

There were no fatal cases.

The average stay in hospital for the discharged cases was 17·2 days.

Complications of the discharged cases.—Otorrhœa (right and left) 1

Whooping Cough.

Ninety cases were certified as Whooping Cough but only 79 of these were confirmed ; in addition, two patients had Whooping Cough in association with another disease. There was one fatal case, a girl aged six months, in hospital 20 days.

Operations.

The number of operations was two, both requiring general anæsthesia. Minor operations are not included. Numerous incisions were done on the wards, mostly requiring local anæsthesia only. The operations tabulated below were carried out on A.2 Ward in the Cubicle Block.

Sex.	Age.	Disease.	Operation.	Days in.	R'cd.	Died.	Total.
F.	26	Septic abortion.	Dilation and curettage	16	1	...	1
M.	5½	Scarlet Fever ...	Mastoid (Schwartze)	61	1	...	1
					2	...	2

Staff.

On 31st December, 1946, the resident staff of the Hospital consisted of the following :—

Medical Superintendent	1
Assistant Medical Officer.............................	1
Matron..	1
Assistant Matron and Home Sister	1
Sister Tutor...	1
Housekeeping Sister....................................	1
Night Sister...	1
Ward Sisters	6
Staff Nurses	11
Assistant Nurses..	8
Student Nurses..	21
Cook...	1
Assistant Cook	1
Domestics...	16
Lodge Porters..	2
	73

The non-resident staff consisted of :—

Visiting Aural Surgeon	1
Tuberculosis Officer	1
Clerk	1
Assistant Clerk	1
Assistant Nurse (male) T.B.	1
Nursing Orderlies (male) T.B.	3
Engineer	1
Joiner	1
Plumber	1
Gardener	1
Garden Labourers	2
Boiler Firemen	3
General Porters	8
Night Porter	1
Dressmaker	1
Seamstresses	2
Cleaners	18
	47

The staff, both nurses and maids, are tested on entering by the Schick and Dick tests and, if positive, immunised against Diphtheria and Scarlet Fever. Twenty-four were Schick tested and five were positive ; these were inoculated with three doses of toxoid-antitoxin floccules at fortnightly intervals, and on retest proved to be negative.

Twenty-five were tested by the Dick test ; all were negative.

Twenty-five of the staff were inoculated against Typhoid Fever.

Work of the Training School.

The usual course of lectures was given by the Medical Staff and the Sister Tutor.

Results :

	Preliminary Examination.	*Final State Examination.*
Entered	6	9
Passed	2	7
	1 passed part.	

Health of Staff.

The following were the illnesses :—Abscess 1 ; Appendicitis 2 ; Coryza 13 ; Gastro-Enteritis 5 ; Influenza 8 ; Jaundice 1 ; Migraine 1 ; Parotitis 1 ; Pleurisy 2 ; Rheumatism 3 ; Scabies 1 ; Septic Fingers 2 ; Tonsillitis 13.

ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1945.	No. of Cases Admitted. 1946.	No. of Cases Treated. 1946.	No. of Cases Discharged. 1946.	No. of Deaths. 1946.	No. of Cases Remaining on Dec. 31st, 1946.
Scarlet fever	28	185	213	199	1	13
Mixed infections.................	...	11	11	9	2	...
Measles............................	...	32	32	22	...	10
Enteric fever	...	...	...	...	...	...
Diphtheria..........................	37	94	131	124	3	4
Erysipelas	2	40	42	41	...	1
Puerperal fever	...	16	16	13	...	3
Tuberculosis.......................	42	112	154	76	45	33
Other diseases	18	500	518	468	20	30
*TOTALS	127	990	1117	952	71	94
Corresponding figures 1945....	149	1265	1414	1195	92	127
Average, 5 years 1941-1945...	...	1341·2	1478·6	1224·8	94·4	...
*Out-district cases included in 1946 totals.................	20	219	239	219	5	15
Out-District cases included. in 1945 totals	21	297	318	290	8	20

ANNUAL REPORT OF THE CITY PATHOLOGIST, 1946.

The appended table gives a list of examinations carried out at the City Public Health Laboratory during 1946. A total of 27,548 specimens was examined, including 394 from the Boroughs of Prestwich, Hazel Grove, Eccles, Whitefield and Stretford.

In addition, as shown in the report from the Clinical Pathology Laboratory, Hope Hospital, 34,602 specimens were examined there giving a grand total of 62,150.

It has been recognised for some time that the number of specimens examined is not a fair criterion of the amount of work done in the laboratory so each test is now calculated in terms of units as recommended by the Ministry of Health Emergency Hospital Service.

For example a throat swab examined by smear and culture for diphtheria bacilli and Vincent's Angina represents 5 units while a Rideal Walker test represents 20 units. The total of 62,150 specimens examined at both laboratories represents 179,157 pathology units.

Food Poisoning.

There were no outbreaks of food poisoning during the year.

Epidemic Diarrhoea.

According to reports received from practitioners in the Salford area cases of " epidemic diarrhœa " continued to occur but there were no major outbreaks as in previous year. The Medical Superintendent of Hope Hospital records 75 cases in the hospital during the year ; 34 of these were in the midwifery wards. The high proportion of cases occurring in the midwifery wards was probably due to the relatively rapid turn-over of patients.

Dysentery.

The following dysentery organisms were isolated from fæces sent to the City Laboratory during 1946.

B. Dysentery Sonne	18 cases.
B. Dysentery Newcastle	7 cases.

Dysentery organisms were also isolated from cases in Hope Hospital, as follows :—

B. Dysentery Sonne	33 cases.
B. Dysentery Flexner	2 cases.

As compared with 1945 this shows a reduction of 50 per cent. in the total number of cases of dysentery detected.

Water Supplies.

Routine monthly examination of water supplies give results as shown in appended table. Both supplies come from the Manchester reservoir Thirlmere (Pendleton Area) and Longdendale (Regent Road Area).

Results show recurring increases in the B. Coli Count in the Longdendale supply which are unsatisfactory for a chlorinated water. Investigations showed that the exceptionally high B. Coli Count in this supply during November were probably due to local contamination caused by a faulty water meter.

Swimming Baths.

The appended table gives the results of bacteriological examinations of swimming bath water during 1945.

		B. Coli *per* 100 *M.L.*
Good	= Bacterial count under 1,000 per M.L.	0
Fair	= ,, ,, ,, 1,000 to 3,000 per M.L.	1-5
Bad	= ,, ,, ,, over 3,000 per M.L.	over 5

Typing of Diphtheria Bacilli.

All diphtheria organisms isolated from throat swabs sent to the City Laboratory from Salford cases during 1946 were typed as shown in the table below :—

Gravis.	*Intermediate.*	*Mitis.*	*Total.*
17	29	8	54

As pointed out in previous reports our present premises at Hope Hospital are much too cramped to allow for the continual growth of work and staff employed. Moreover, under the new National Health Service Act which is expected to come into operation next July, a comprehensive Pathological Service —quite apart from the present Public Health Bacteriology Service—has been promised to all general practitioners in the area. This will mean a rapid increase in the amount of work which will be sent to the laboratory and can only be undertaken by providing extra staff and suitable accommodation.

EXAMINATION OF SWIMMING BATH WATER.

Bath.	Good.	Fair.	Bad.	Total.
Seedley, 1st Class	19	1	1	21
Seedley, Ladies	21	1	1	23
Seedley, 2nd Class	22	1	3	26
Blackfriars, Large	17	2	2	21
Blackfriars, Small	16	1	2	19
Regent Road, Male	13	2	4	19
Regent Road, Female	11	5	4	20
TOTAL	119	13	17	149

TESTS CARRIED OUT ON TAP WATER SAMPLES IN THE PENDLETON AND REGENT ROAD DISTRICTS.

	PENDLETON.			REGENT ROAD.		
Month, 1946.	Count at 37° C. for 48 hours.	Count at 22° C. for 72 hours.	B. Coli per 100.	Count at 37° C. for 48 hours.	Count at 22° C. for 72 hours.	B. Coli per 100.
January	2	3	0	7	10	0
February	2	9	0	2	12	0
March	3	4	0	6	14	3
April	7	12	0	2	3	0
May	0	3	0	4	12	1
June	4	72	1	0	0	0
July	4	25	0	0	12	0
August	2	6	0	4	5	2
September	0	3	1	6	12	2
October	2	6	0	1	3	2
November	Not Sampled.			1	5	25
December	0	0	0	2	3	0

Examinations made in the Pathological Laboratory, Regent Road, Salford, 5, 1946.

Examinations made for the City of Salford.

	No. of Specimens.	Units.	Total Units.
Hæmoglobin Estimations	1,842	(1)	1,842
Widal Reactions	64	(5)	320
Wassermann Tests	7,941	(2)	15,882
Kahn Tests	11,850	(2)	23,600
Gonorrhœa Complement Fixation Tests	1,391	(2)	2,782
Smears for Gonococci	52	(2)	104
Gonococcal Cultures	117	(3)	351
Milk Counts	5	(4)	20
,, Methylene Blue Tests	255	(2)	510
,, Bacillus Coli Tests	257	(3)	771
,, Direct Micro Examination for M. Tuberculosis	1	(2)	2
,, Bottles for Sterility	4	(3)	12
Examinations of Swabs for C. Diphtheria	1,337	(5)	6,685
,, ,, ,, ,, Hæmolytic Streptococci	27	(5)	135
,, ,, ,, ,, Organisms	1	(5)	5
,, ,, ,, ,, Penicillin Sensitivity	8	(3)	24
,, ,, Sputa for M. Tuberculosis	1,087	(2)	2,174
,, ,, ,, ,, Organisms	2	(2)	4
,, ,, Urine	16	(3)	48
,, ,, Fæces	131	(7)	917
,, ,, Rectal Swabs	33	(7)	231
,, ,, Drinking Water	61	(10)	610
,, ,, Swimming Bath Water	149	(10)	1,490
,, ,, Hair for Ringworm Parasite	4	(2)	8
,, ,, Beast's Ear for Anthrax Bacilli	7	(3)	21
,, ,, Ice Cream and Synthetic Cream, etc.	40	(5)	200
,, ,, Various Foods for Food Poisoning Organisms	5	(5)	25
,, ,, Pleural Fluids	3	(5)	15
Rideal-Walker Tests	4	(20)	80
Preparation of Autogenous Vaccines	2	(10)	20
Asheim-Zondek Tests	11	(10)	110
Virulence Tests	15	(10)	150
Typing of Coliform Organisms	369	(4)	1,476
,, ,, C. Diphtheria	63	...	...
	27,154	...	60,624

Examinations made for Other Authorities during the Year 1946.

Examinations.	Prestwich.	Hazel Grove.	Eccles.	Whitefield.	Stretford.	Total No. of Specimens.	Units.	Total Units.
Examination of Swabs for C. Diphtheria	195	...	...	8	...	203	5	1,015
Examination of Swabs for Hæolytic Streptococci	1	...	...	...	...	1	5	5
Examination of Sputa for M. Tuberculosis	8	...	...	...	...	8	2	16
Virulence Tests	5	...	...	...	...	5	10	50
Widal Tests	2	...	...	...	...	2	5	10
Milk, Methylene Blue	29	11	28	...	...	68	2	136
,, Count	25	9	3	...	...	37	4	148
,, Bacillus Coli Test	22	9	3	...	...	34	3	102
,, Guinea Pig Inoculation	8	7	...	...	...	15	10	150
Examination of Swimming Bath Water	...	...	2	...	...	2	10	20
Examination of Drinking Water	1	...	...	...	...	1	10	10
,, ,, Ice Cream	16	...	...	...	...	16	5	80
,, ,, Various Foods for Food Poisoning Organisms	...	...	...	...	2	2	5	10
						394		1,752

CITY ANALYST'S REPORT.

FOOD AND DRUGS ACT 1938.

The following table (Table 1) contains particulars of 1,742 samples examined for the City of Salford under the Food and Drugs Act 1938, during the year 1946.

TABLE 1.

SAMPLES.	Number Examined.	Number Adulterated or otherwise giving rise to irregularity.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk	1,275	—	46	3·6
Condensed Milk	7	—	—	—
Butter	48	—	—	—
Margarine	47	—	—	—
Cheese	48	—	—	—
Cooking Fat	43	—	—	—
Lard	5	—	—	—
Tea	26	—	—	—
Sugar	48	—	—	—
Cocoa	6	—	—	—
Coffee	6	—	—	—
Coffee and Chicory	1	—	—	—
Malt and Cocoa Beverage	2	—	—	—
Malt Beverage Preparation	2	—	1	50
Flour	1	—	—	—
Self-Raising Flour	6	—	—	—
Baking Powder	3	—	—	—
Golden Raising Powder	4	—	—	—
Custard Powder	3	—	—	—
Barley Pudding Mixture	1	—	—	—
Semolina	5	—	—	—
Barley	5	—	—	—
Soyamalt	1	—	—	—
Vitamin Chocolate	1	—	—	—
Shredded Beef Suet	2	—	—	—
Chocolate Cake Mixture	1	—	—	—
Marmalade Pudding	2	—	—	—
Sausage	5	—	—	—
Tinned Baked Beans	6	—	—	—
Jam	4	—	—	—
Marmalade	4	—	—	—
Tinned Soup	7	—	—	—
Tinned Homogenised Vegetables	3	—	—	—
Fish Paste	2	—	—	—
Meat Paste	1	—	—	—
Apple Juice	1	—	—	—
Mustard Compound	2	—	—	—
Tinned Fish	3	—	—	—
Curry Powder	4	—	—	—

TABLE 1—*Continued.*

Samples.	Number Examined.	Number Adulterated or otherwise giving rise to irregularity.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Mixed Spice	2	—	—	—
Ground Ginger	1	—	—	—
Pepper	3	—	—	—
Malt Vinegar	1	—	—	—
Non-brewed Vinegar	3	—	—	—
Sage and Onion Stuffing	2	—	—	—
Gravy Browning	7	—	2	28·6
"Jelly Creme"	1	—	1	100
"Unicream"	1	—	—	—
Cod Liver Oil and Malt Extract	2	—	—	—
Cod Liver Oil	2	—	—	—
Raspberry Vinegar and Edible Oil	2	—	—	—
Nut Oil	1	—	—	—
Chocolate Laxative	3	—	—	—
Rose Hip Syrup	1	—	—	—
Lemon, Honey and Ipecac	1	—	—	—
Gelatine	2	—	—	—
Sulphur Tablets	3	—	2	66·6
Fever Mixture	2	—	1	50
Seidlitz Powders	6	—	—	—
Health Salts	1	—	—	—
Glycerine	3	—	—	—
Glycerine of Borax	2	—	—	—
Bicarbonate of Soda	3	—	—	—
Epsom Salts	4	—	—	—
Castor Oil	4	—	—	—
Camphorated Oil	2	—	—	—
Liquid Paraffin	1	—	—	—
Rochelle Salts	2	—	—	—
Cream of Magnesia	2	—	—	—
Syrup of Figs	3	—	1	33·3
Phenolphthalein Laxative	2	—	—	—
Cough Mixture	6	—	—	—
Cream of Tartar	2	—	—	—
Preserving Tablets	3	—	1	33·3
Fullers Earth Cream	2	—	1	50
Hydrogen Peroxide	2	—	—	—
Fullers Earth Ointment	2	—	—	—
Iodine Paint	1	—	1	100
Zinc Ointment	6	—	—	—
Zinc and Castor Oil Ointment	1	—	—	—
Zinc and Castor Oil Cream	1	—	—	—
	1,742	—	57	3·3

TABLE 2.

PERCENTAGE OF ADULTERATION—SALFORD.

Year.	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Percentage of Adulteration....	7·1	7·2	7·1	6·9	7·2	6·1	3·7	3·1	3·9	3·3
Total Samples ...	1,323	1,284	1,353	1,344	1,296	1,512	1,555	1,513	1,628	1,742
Formal Samples..	456	396	377	406	427	464	499	427	385	389
Informal Samples	867	888	976	714	753	884	833	891	1,077	1,205
Private Samples..	—	—	—	224	116	164	223	195	166	148
No. of Samples per 100,000 of the population...	642	636	679	685	748	946	1,014	989	1,045	1,022

Calculated on civil population only from 1941 onwards.

TABLE 3.

ADULTERATION OF MILK—SALFORD.

Year.	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
No. of Samples...	1,020	1,006	923	930	923	919	883	995	1,107	1,074	1,147	1,275
Percentage of Adulteration ...	4·3	3·0	5·9	6·2	6·5	5·4	5·7	6·2	3·1	1·9	3·5	3·6

TABLE 4.

MILK ADULTERATION—ENGLAND AND WALES.

Year.	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939-1945
Percentage of Adulteration.....	7·8	6·6	6·4	7·3	7·7	7·2	7·4	6·7	7·7	7·7	Not available

TABLE 5.

AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples.	Total Solids per cent.		Fat per cent.		Solids-not-fat per cent.	
January	100	12·18	12·28	3·50	3·56	8·68	8·72
February	108		12·24		3·53		8·71
March...........	120		12·05		3·43		8·62
April	92	12·05	11·94	3·40	3·39	8·65	8·55
May	132		12·08		3·39		8·69
June	100		12·12		3·44		8·68
July	118	12·26	12·03	3·57	3·41	8·69	8·62
August	91		12·33		3·62		8·71
September	106		12·45		3·69		8·76
October..........	133	12·50	12·52	3·72	3·74	8·78	8·78
November	78		12·60		3·77		8·83
December	97		12·41		3·65		8·76
	1,275		12·25		3·55		8·70

TABLE 6.

AVERAGE COMPOSITION OF FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.		Fat per cent.		Solids-not-fat per cent.	
January	19	12·13	12·31	3·48	3·58	8·65	8·73
February	25		12·24		3·59		8·65
March...........	31		11·92		3·32		8·60
April	22	12·08	12·00	3·46	3·44	8·62	8·56
May	56		12·12		3·46		8·66
June	24		12·07		3·51		8·56
July	44	12·25	11·93	3·60	3·41	8·65	8·52
August	45		12·40		3·68		8·72
September	26		12·55		3·78		8·77
October..........	51	12·64	12·62	3·81	3·81	8·83	8·81
November	32		12·90		3·96		8·94
December	36		12·44		3·66		8·78
	411		12·30		3·60		8·70

TABLE 7.

Average Composition of Milk other than Farmers' Milk.

Month.	Number of Samples.	Total Solids per cent.		Fat per cent.		Solids-not-fat per cent.	
January	81	12·20	12·26	3·51	3·55	8·69	8·71
February	83		12·24		3·51		8·73
March...........	89		12·09		3·46		8·63
April	70	12·04	11·92	3·38	3·38	8·66	8·54
May	76		12·04		3·33		8·71
June	76		12·14		3·42		8·72
July	74	12·26	12·09	3·55	3·42	8·71	8·67
August	46		12·25		3·55		8·70
September	80		12·42		3·66		8·76
October..........	82	12·42	12·45	3·66	3·69	8·76	8·76
November	46		12·39		3·64		8·75
December	61		12·39		3·64		8·75
	864		12·22		3·52		8·70

TABLE 8.

Average Composition of All Milk—Salford.

Year.	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
	%	%	%	%	%	%	%	%	%	%	%	%
Fat	3·65	3·66	3·67	3·64	3·61	3·66	3·69	3·66	3·63	3·64	3·59	3·55
Solids-not-fat	8·85	8·89	8·85	8·83	8·79	8·70	8·65	8·63	8·69	8·73	8·66	8·70
Total Solids	12·50	12·55	12·52	12·47	12·40	12·36	12·34	12·29	12·32	12·37	12·25	12·25

In Tables 9 and 12 will be found details of 57 samples reported as "adulterated or otherwise giving rise to irregularity." The percentage adulteration is therefore 3·3, a figure which is in close agreement with that for the last three years. A big proportion of the samples reported as adulterated consisted of milks showing deficiencies in fat content of less than 10 per cent., or in solids-not-fat of less than 3 per cent. of the respective presumptive minimum limits. Most of the cases were dealt with by letters of caution. Legal proceedings were instituted in one case. The fine (including costs) inflicted amounted to £3 1s. 0d.

TABLE 9.

MILK ADULTERATION.

No.	Nature of Adulteration, etc.	Action Taken.	Remarks.
B1527	Deficient 6·6% milk fat	Formal samples genuine	Informal sample.
B1569	1·8% extraneous water F.Pt. Hortvet —0·503	Formal samples genuine	Informal sample.
B1628	1·0% extraneous water F.Pt. Hortvet —0·525	Formal samples taken	See Nos. A1229 and A1230.
B1629	2·2% extraneous water F.Pt. Hortvet —0·518		
A1229	1·9% extraneous water F.Pt. Hortvet —0·520	Supply kept under observation.	Later samples genuine.
A1230	2·2% extraneous water F.Pt. Hortvet —0·518		
B1660	0·6% extraneous water F.Pt. Hortvet —0·522	Formal samples taken	See Nos. A1236 and A1237.
A1236	2·4% extraneous water F.Pt. Hortvet —0·512	Farmer cautioned	Later samples genuine.
A1237	1·9% extraneous water F.Pt. Hortvet —0·522		
A1272	2·0% extraneous water F.Pt. Hortvet —0·528	No action	Retail supply. Further samples genuine.
B1777	Deficient 6·6% milk fat	Supply kept under observation.	Farm milk. Further samples genuine.
B1787	Deficient 3·3% milk fat	Further samples taken	See Nos. B1792-B1796 and B1799.
B1788	Deficient 3·3% milk fat		
B1792	Deficient 8·3% milk fat	Farmer written	See special observations.
B1793	Deficient 3·3% milk fat		
B1794	Deficient 10·0% milk fat		
B1795	Deficient 10·0% milk fat		
B1796	Deficient 3·3% milk fat		
B1799	Deficient 6·6% milk fat		
A1309	3·0% extraneous water F.Pt. Hortvet —0·510	Farmer written.	See special observations.
A1312	Deficient 1·6% milk fat		
A1314	Deficient 3·3% milk fat		
B1944	Deficient 16·6% milk fat	Farmer written	See special observations.
B2029	Deficient 5·0% milk fat	Supply kept under observation.	Farm milk. Further samples genuine.

TABLE 9—*Continued.*

No.	Nature of Adulteration, etc.	Action Taken.	Remarks.
B2025	Deficient 6·6% milk fat	Further samples taken	See Nos. B2132 and B2133.
B2132	2·8% extraneous water F.Pt. Hortvet —0·515	Farmer cautioned	See special observations.
B2133	2·0% extraneous water F.Pt. Hortvet —0·519		
B2156	Deficient 5·0% milk fat	Supply kept under observation.	Farm milk. Further samples genuine.
B2189	Deficient 13·3% milk fat	Farmer written	See special observations.
B2190	Deficient 1·6% milk fat		
B2191	Deficient 20·0% milk fat		
B2194	Deficient 23·3% milk fat	Farmer written	See special observations.
B2195	Deficient 3·3% milk fat		
B2196	Deficient 15·0% milk fat		
B2197	Deficient 10·0% milk fat		
B2198	Deficient 15·0% milk fat		
B2247	Deficient 3·3% milk fat	Supply kept under observation.	Further samples genuine.
A1421	6·2% extraneous water F.Pt. Hortvet —0·476	Supplier cautioned	Sterilised milk. See special observations.
B2294	Deficient 5·0% milk fat	Farmer written	See special observations.
B2309	Deficient 10·0% milk fat		
A1484	1·4% extraneous water F.Pt. Hortvet —0·511	Further samples genuine	Retail supply.
A1505	8·1% extraneous water F.Pt. Hortvet —0·468	Prosecution and conviction. £3 1s. 0d., including costs.	See special observations.
A1519	Deficient 10·0% milk fat	Shopkeeper cautioned	See special observations.
A1535	4·0% extraneous water F.Pt. Hortvet —0·499	Dairy company cautioned	See special observations.
A1537	1·5% extraneous water F.Pt. Hortvet —0·507		
A1532	3·4% extraneous water F.Pt. Hortvet —0·509	Vendor cautioned	See special observations.

Milk.

One thousand two hundred and seventy-five samples of milk were examined during the year, 411 being samples of farmers' milk taken in course of delivery to wholesalers and retailers in Salford. As will be noted from Tables 5, 6 and 7, the average butter fat content of all milk for the whole year was 3·33 per cent., that of farmers' milk being 3·60 per cent., and that of milk from all other sources 3·52 per cent. The farmers' milk therefore showing, if anything, a very slightly higher figure for butter fat than retail milks.

The number of milk samples which were poor in solids-not-fat when compared with the presumptive limit of the Sale of Milk Regulations 1939, but which were nevertheless adjudged genuine on the Hortvet freezing point test, totalled 41. Of these 8 occurred in the March quarter, 13 in the June quarter, 17 in the September quarter and 3 in the December quarter. The numbers of such milks in the five preceding years were as follows :—1941, 61 samples ; 1942, 72 samples ; 1943, 36 samples ; 1944, 17 samples ; 1945, 39 samples.

TABLE 10.

Average Butterfat Content of Milk—Salford.

Year.	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
All Milks	3·67	3·64	3·61	3·66	3·69	3·66	3·63	3·64	3·59	3·55
Farmers' Milks	3·74	3·69	3·62	3·70	3·71	3·71	3·62	3·74	3·65	3·60
Other than Farmers' Milks	3·60	3·59	3·60	3·64	3·67	3·64	3·64	3·62	3·57	3·52

Forty-six samples of milk were reported upon as " adulterated or otherwise giving rise to irregularity " during the year. Before a milk was reported upon as adulterated due to deficiency in solids-not-fat it was submitted to the Hortvet freezing point test, any samples passing this test were certified as naturally deficient. The above figure represents a percentage adulteration of 3·6. The figure for milk adulteration throughout England and Wales during the last 12 years for which figures are available varied from 6·4 per cent. to 8·2 per cent., so that in the light of this the Salford figure cannot be considered as unsatisfactory.

In the following table will be found particulars of the various types of adulteration and the number of samples under each heading :—

Milks deficient in fat only	28 or 2·2%
Milks containing added water only	18 or 1·4%
Milks deficient in fat and containing added water	Nil
	46 or 3·6%
Milks containing more than 3% added water	4 or 0·3%
Milks 10% or more deficient in fat	11 or 0·9%

No samples contained colouring matter or preservative.

TABLE 11.

The following samples of milk showed figures for solids-not-fat below the presumptive limit of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939, but were adjudged genuine on the Hortvet freezing point test :—

No.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.	Freezing Point (Hortvet)
B1632............	11·40	3·50	7·90	—0·530°C.
B1633............	11·70	3·30	8·40	—0·533°C.
A1279............	11·53	3·20	8·33	—0·548°C.
A1282............	11·74	3·40	8·34	—0·536°C.
B1777............	10·90	2·80	8·10	—0·530°C.
B1778............	11·90	3·50	8·40	—0·532°C.
B1785............	12·50	4·10	8·40	—0·547°C.
B1788............	11·80	3·50	8·30	—0·557°C.
A1307............	11·31	3·00	8·31	—0·545°C.
A1308............	11·91	3·55	8·36	—0·532°C.
A1310............	11·49	3·00	8·49	—0·535°C.
A1311............	12·05	3·75	8·30	—0·534°C.
A1312............	11·43	2·95	8·48	—0·534°C.
A1314............	11·19	2·90	8·29	—0·537°C.
B1849............	11·86	3·45	8·41	—0·544°C.
B1943............	11·71	3·25	8·46	—0·539°C.
B2022............	11·42	3·00	8·42	—0·535°C.
B2128............	13·52	5·20	8·32	—0·549°C.
B2148............	11·79	3·40	8·39	—0·548°C.
B2949............	11·27	3·00	8·27	—0·546°C.
B2156............	11·17	2·85	8·32	—0·544°C.
B2190............	11·19	2·95	8·24	—0·544°C.
B2191............	10·62	2·40	8·22	—0·539°C.
B2192............	11·50	3·10	8·40	—0·544°C.
B2194............	10·64	2·30	8·34	—0·544°C.
B2195............	11·25	2·90	8·35	—0·565°C.
B2197............	10·73	2·70	8·03	—0·547°C.
B2198............	10·70	2·55	8·15	—0·573°C.
B2199............	11·13	3·00	8·13	—0·547°C.
A1404............	11·32	3·00	8·32	—0·547°C.
A1406............	12·48	4·10	8·38	—0·552°C.
A1407............	11·52	3·10	8·42	—0·547°C.
A1408............	12·41	4·25	8·16	—0·533°C.
A1409............	11·42	3·15	8·27	—0·544°C.
B2247............	11·28	2·90	8·38	—0·534°C.
B2367............	11·95	3·80	8·15	—0·550°C.
B2368............	11·24	3·00	8·24	—0·545°C.
B2370............	11·79	3·40	8·39	—0·549°C.
B2573............	11·41	3·00	8·41	—0·552°C.
B2752............	11·48	3·20	8·28	—0·540°C.
B2756............	11·93	3·45	8·48	—0·549°C.

The next paragraphs give brief accounts of the more interesting adulterated samples.

Samples Nos. B1660, A1236 and A1237, Milk.

The first of these was an informal sample representing farm milk taken on delivery to a Salford dairy. On analysis it was found to contain only 8·45 per cent. solids-not-fat corresponding (on comparison with the 8·5 per cent. limit of the Sale of Milk Regulations 1939) to the presence of 0·5 per cent. extraneous water, which was confirmed by the freezing point test. The formal samples Nos. A1236 and A1237 were then taken, and these upon analysis gave the following figures :—solids-not-fat 8·29 per cent. and 8·34 per cent. respectively, corresponding to the presence of 2·4 per cent. and 1·9 per cent. of added water. A letter of caution was deemed sufficient action and the supply has been kept under observation.

Samples Nos. B1787 and B1788, Milk.

Both these samples, representing two out of ten cans sent together, were 3·3 per cent. deficient in fat. Further samples were taken on another day representing every can sent by the same farmer (see next paragraph).

Samples Nos. B1792, B1793, B1794, B1795, B1796 and B1799, Milk.

These samples represented six out of eleven cans sent together by the same farmer. The six samples contained 2·75, 2·9, 2·7, 2·7, 2·9 and 2·8 per cent. of fat and the respective fat deficiencies (on comparison with the 3·0 per cent. limit of the Sale of Milk Regulations, 1939) were 8·3, 3·3, 10·0, 10·0, 3·3 and 6·6 per cent. of the required amount of fat. The remaining five samples from the same farmer contained respectively 3·4, 3·8, 3·7, 3·1 and 3·2 per cent. of fat. In this case it was deemed sufficient to write a letter to the farmer suggesting that he should take steps to improve the quality of the milk of his herd.

Samples Nos. A1309, A1312 and A1314, Milk.

These samples were three out of nine samples representing nine cans of milk consigned together to a City dairy by the same farmer. On analysis, Sample No. A1309 was found to contain 8·24 per cent. of solids-not-fat. Comparing this result with the presumptive limit of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations 1939, the sample was deficient in non-fatty solids to the extent of 3·0 per cent. The freezing point of the sample was found to be —0·510°C., indicating the presence of approximately 3 per cent. of extraneous water in the sample. Six other samples from this consignment were found by the freezing point test to be naturally poor in solids-not-fat. (See Nos. A1307, A1308, A1310, A1311, A1312 and A1314 in Table 11.) Samples Nos. A1312 and A1314 were found to contain 2·95 per cent. and 2·90 per cent. of fat respectively, corresponding to deficiencies of 1·6 per cent. and 3·3 per cent. of the presumptive limit (namely 3·0 per cent. fat) fixed by the Sale of Milk Regulations. A letter was sent to the farmer strongly representing the seriousness of extraneous water (present in one can) and at the same time drawing his attention to relatively slight fat deficiencies (in two cans), and suggesting that he should take steps to improve the general quality of the milk of his herd.

Sample No. B1944, Milk.

This sample was found to contain 2·50 per cent. of fat, and when compared with the presumptive limit of 3·0 per cent. of fat required by the Sale of Milk Regulations, was deficient in fat to the extent of 16·6 per cent. The deficiency in this case was less serious because the sample represented one of three cans of milk consigned together by the same farmer and samples from the other cans contained 3·85 per cent. and 3·25 per cent. of fat respectively. One of these three samples was naturally slightly poor in non-fatty solids (see Sample No. B1943 in Table 11). In this case it was deemed sufficient to write a letter to the farmer requesting him to bring his milk up to the requirements of the Regulations.

Samples Nos. B2132 and B2133, Milk.

These two informal samples were two out of eight samples, each representing one can of a farmer's consignment at a City dairy. On analysis they showed deficiencies in non-fatty solids (when compared with the limits, namely 8·5 per cent. non-fatty solids, fixed by the Sale of Milk Regulations, 1939), and the deficiencies corresponded to additions of 0·4 per cent. and 2·5 per cent. of water respectively. The freezing points found (—0·515°C. and —0·519°C. Hortvet) confirmed the presence of extraneous water. The farmer was written urging him to prevent access of extraneous water in future.

Samples Nos. B2189, B2190 and B2191, Milk.

These informal samples represented three out of five cans consigned together by the same farmer to a City dairy. They contained respectively 2·60 per cent., 2·95 per cent. and 2·40 per cent. of fat, corresponding to fat deficiencies of 13·3 per cent., 1·6 per cent. and 20·0 per cent. of the presumptive minimum amount of fat, namely 3·0 per cent., required by the Sale of Milk Regulations 1939. Samples from the other two cans (Nos. B2192 and B2193) contained 3·10 per cent. and 3·40 per cent. of fat. (See also Nos. B2190, B2191 and B2192 in the preceding Table 11.) The farmer was urged by letter to take steps to bring the fat content of his milk up to the requirements of the Regulations and was advised to consult an Agricultural College with a view to improving the milk of his herd.

Samples Nos. B2194, B2195, B2196, B2197, B2198 and B2199, Milk.

These six informal samples represented six cans consigned together by the same farmer to a City dairy. Five of the samples appear in the preceding Table 11. The six samples contained respectively 2·30 per cent., 2·90 per cent., 2·55 per cent., 2·70 per cent., 2·55 per cent. and 3·0 per cent. of fat, showing deficiencies of 23·3 per cent., 3·3 per cent., 15·0 per cent., 10·0 per cent., 15·0 per cent. and zero per cent. of the presumptive minimum limit (3·0 per cent.) set by the Sale of Milk Regulations. In view of these deficiencies the consignment was sampled formally (see next paragraph).

Samples Nos. A1404, A1405, A1406, A1407, A1408 and A1409, Milk.

(See preceding paragraph.) These six formal samples represented the same farmer's consignment on a later day. On this occasion every sample satified or exceeded the minimum presumptive limit for fat. Five of the samples (see Nos. A1404, A1406, A1407, A1408 and A1409 in Table 11 above) contained less than the 8·5 per cent. minimum presumptive limit for non-fatty solids, but were adjudged genuine by the freezing point test. The farmer was advised by letter to consult an Agricultural College with a view to the improvement of the milk of his herd.

Sample No. A1421, Milk.

This formal sample of sterilised milk represented a " swing-stoppered " pint bottle purchased by retail at a shop. On analysis it was found to contain only 7·97 per cent. non-fatty solids, and was therefore deficient in non-fatty solids, when compared with the 8·5 per cent. minimum limit of the Sale of Milk Regulations, by an amount corresponding to the presence of 6·2 per cent. of extraneous water. The presence of extraneous water was confirmed by the freezing point, which was found to be —0·476°C. (Hortvet). In view of the strong probability that the sample was in the same condition in which it had been received from the sterilising dairy supplying the shop, a letter was sent to the supplier urging him to take every precaution to prevent the access of extraneous water to his milk.

Sample No. A1505, Milk.

This sample, purchased " loose " in a shop, was found on analysis to contain only 7·81 per cent. of solids-not-fat, corresponding to the presence of 8·1 per cent. of extraneous water (on comparison with the presumptive minimum limit of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations). The freezing point of the sample was —0·468°C., indicating the presence of at least 11·5 per cent. of extraneous water. Legal proceedings were instituted and the case was heard before the City Stipendiary Magistrate on 6th December, when each defendant (the proprietors of the shop were two partners) was fined £1 and 10s. 6d. costs ; the total amounting to £3 1s. 0d.

Sample No. A1519, Milk.

This sample represented a one-pint bottle of milk sold in a shop. It was found on analysis to contain only 2·7 per cent. fat and was therefore deficient in fat to the extent of 10 per cent. of the minimum amount, namely 3·0 per cent., required by the Sale of Milk Regulations. Further samples representing bottles delivered by the same supplier to the shop next day, were genuine. In the circumstances it was deemed sufficient to send a letter to the shopkeeper pointing out that it is an offence to sell milk failing to satisfy the Regulations.

Samples Nos. A1535 and A1537, Milk.

Formal sample No. A1535 represented a disc-covered pint bottle of milk purchased by retail in a shop. On analysis the sample was found to contain only 8·16 per cent. of non-fatty solids, and on comparison with the presumptive limit of 8·5 per cent. non-fatty solids fixed by the Sale of Milk Regulations 1939, the deficiency corresponded to the presence of 4·0 per cent. of extraneous water in the milk. The presence of extraneous water was confirmed by the freezing point, which was found to be —0·499°C. (Hortvet). The next day a sample was obtained in course of delivery to the shop from the dairy company regularly supplying the shop, and on the same occasion three samples were obtained from bottles on the vehicle delivering the milk. The sample of milk in course of delivery, and also two of the samples from the vehicle, were found to be genuine. The third sample from the vehicle however, No. A1537, was found to contain only 8·37 per cent. of non-fatty solids, corresponding to the presence of 1·5 per cent. of extraneous water. Extraneous water was again confirmed by the freezing point, which was found to be —0·507°C. (Hortvet). In the circumstances it was deemed appropriate to send a strong letter of caution to the dairy company.

Sample No. A1532, Milk.

This sample represented a disc-covered pint bottle of milk purchased from a shop. On analysis the milk was found to contain only 8·21 per cent. of non-fatty solids. On comparison with the presumptive limit of 8·5 per cent. non-fatty solids fixed by the Sale of Milk Regulations 1939, the deficiency corresponded to the presence of 3·4 per cent. of extraneous water in the milk ; and the presence of extraneous water was confirmed by the freezing point test. On a subsequent day four samples were taken representing milk in course of delivery to the same shop by a processing dairy, and these sample were all found to be genuine. In the circumstances it was deemed appropriate to draw the vendor's attention to the deficiency, and to warn her by letter that it is an offence to sell milk below the limit fixed by the Regulations.

Phosphatase Tests on Milk Samples submitted by the City of Salford.

In addition to the milk samples examined under the Food and Drugs Act 1938, 284 samples were submitted for examination by the phosphatase test. The results obtained on these samples are tabulated below :—

Type of Milk.	No. of Samples.	Sufficiently heat-treated.	Insufficiently heat-treated.	Grossly under-treated.
Pasteurised........	216	191	10	15
Heat-treated	48	45	2	1
Sterilised..........	21	21	—	—
	285	257	12	16

TABLE 12.

Samples (other than Milk) Adulterated or otherwise giving Rise to Irregularity.

No.	Description.	Nature of Adulteration, etc.	Remarks.
B1697...	Iodine Paint............	Deficient 16% of iodine declared.	Packer warned.
B1698...	Gravy Browning	Unsatisfactory label.....	Packer written.
B2392...	Gravy Browning	Unsatisfactory label.....	Label amended.
B1804...	Syrup of Figs	Unsatisfactory label.....	See special observations.
B1957...	Fullers Earth Cream	No declaration of " active ingredients."	See special observations.
B2035...	Fever Mixture	Deficient 37% of nitric acid declared.	Packers written.
B2087...	Sulphur Tablets	Unsatisfactory label.....	Packers written.
B2088...	Sulphur Tablets	41% excess sulphur, and unsatisfactory label.	Packers written.
B2245...	" Jelly Creme "	Unsatisfactory label.....	Referred to Ministry of Food.
B2533...	Malt Beverage Preparation.	Label obscured	Packers notified.
B2634...	Fruit Preserving Tablets.	63·6% deficient in sulphur dioxide.	Further sample unobtainable.

Sample No. B1697, Iodine Paint.

This sample bore a label declaring the iodine content to be 2·5 per cent. and on analysis the amount found was 2·1 per cent., a deficiency of 16 per cent. of the amount declared. The packer has undertaken in reply to a warning letter to avoid a repetition of the infringement.

Sample No. B1698, Gravy Browning.

The ingredients of this material were declared as follows :—" Solution of Burnt Sugar, Salt, Glucose, Caramel Colour, Calcium Bisulphite." On analysis the total solids were found to amount to 34·6 per cent. of the sample, while the common salt amount to 23·0 per cent. of the sample. Thus the chief ingredient was common salt, and the Labelling of Food (No. 2) Order 1944, requires that this should be named first in the list of ingredients. The packer's attention was directed by letter to the requirements of the Order, and he undertook to amend the label at once.

Sample No. B2392, Gravy Browning.

This informal sample bore a label similar to the one reported as unsatisfactory in the case of sample No. B1698. The packers had undertaken to amend the label so that the chief ingredient other than water, namely common salt, should be printed first in the list of ingredients. Enquiry showed that the present sample was old stock, and a further sample bore an amended label which was considered to be satisfactory.

Sample No. B1804, Syrup of Figs.

The label of this sample included the words "———'s own formula. Syrup of Figs. Dose: Half to one teaspoonful . . ." A formula for Syrup of Figs is given in the British Pharmaceutical Codex, 1934, and the ingredients are figs, sugar and water only. The chief purpose of Syrup of Figs, B.P.C., which in itself has little effect as a laxative medicine, is as an ingredient of "Compound Syrup of Figs," also described in the B.P.C., and which contains also three ingredients contributing a laxative effect. In the past, representations have been made to manufacturers from this department and it would appear that the words "own formula" are an attempt to cover the points at issue. For some time a test case has been pending between the Pharmaceutical Society and a trade organisation, to determine whether the dose given upon a label constitutes a recommendation as a medicine within the meaning of the Pharmacy and Medicines Act, 1941. An enquiry has been sent from this department to the secretary of the Society, who replied that the case will probably be decided shortly. My opinion is that in the present instance, the "proportion of active ingredients" should be declared, but that further action should be deferred until the conclusion of the test case mentioned, as this case covers one point at issue.

NOTE added later: The test-case was tried in the High Court during October, 1946; and was taken further to the Court of Appeal in April, 1947. The decision of the Appeal Court includes a finding that a statement of dose is not in itself a recommendation as a medicine for the purposes of the Act.

Sample No. B1957, Fullers' Earth Cream.

This informal sample was contained in a "tin" ointment box, and resembled an ointment in consistency. It was found on analysis to contain 4·4 per cent. of fullers' earth and 5·1 per cent. of zinc oxide in an ointment base containing lanoline. The opinion was formed that in this instance, the "active ingredients" should have been declared, but that it would be advisable to defer further action until after the hearing of a pending test-action which is expected to clarify the interpretation of the words "substance recommended as a medicine" in Section 11 of the Pharmacy and Medicines Act, 1941.

Sample No. B2035, Fever Mixture.

This informal sample of pre-packed medicine bore a label giving a formula. The chief, and probably the only active, ingredient declared was nitric acid B.P. 1·53 per cent. On analysis the amount of nitric acid B.P. was found to be 0·95 per cent. ; a deficiency of 37 per cent. of the declared quantity. A letter was sent to the packer urging him to comply strictly in future with the declaration.

Sample No. B2088, "Lime Flavoured Sulphur Tablets."

This informal sample of pre-packed tablets bore a declaration of composition on the printed carton. On analysis the following results were obtained :—

	Percentage Found	Percentage Declared
Sulphur	35·4	25
Tartaric Acid	Tartaric Acid and/or Tartrates present.	2·5
Calcium Carbonate	42	(Not declared)

The sulphur was found to be excessive to the extent of 41 per cent. of the amount declared. Further, the calcium carbonate (present presumably as an ingredient of the tablet " basis ") is pharmaceutically " incompatible " with the tartaric acid declared. The packers were notified and requested to ensure that in future the products would comply strictly with the declaration.

Sample No. B2087, "Lime Flavoured Sulphur Tablets."

This informal sample of pre-packed tablets (not by the same packer) bore a similar declaration to that of No. B2088 (noted above). In this case the amount of sulphur was found to comply reasonably with the declaration. Calcium carbonate was again found to be present (12·8 per cent.). The incompatibility of this ingredient with the tartaric acid declared was pointed out by letter to the packers who were requested in future to comply strictly with the declaration.

Sample No. B2245, "Jelly Creme."

This product was contained in an envelope bearing the words " Formula—¾oz. Flavouring and artificial colouring and jelly base," also giving the name and address of the packers. No price was stated. The envelope enclosed two packets ; one packet contained rather more than three-quarters of an ounce of powdered gelatine, the other contained about one-quarter of an ounce of wheat flour with some maize starch and a little flavour and colour. In my view, the wheat flour was a separate and substantial ingredient and should have been declared independently of the word " flavouring." The attention of the Ministry of Food was drawn to the product with a view to their action under the " Manufactured and Pre-packed Foods Orders," 1942, etc., and the " Labelling of Food Order," 1944.

Sample No. B2533, Malt Beverage Preparation.

This informal sample was contained in a tin bearing a statement of ingredients (as required by the Labelling of Food Order). The statement was however obscured by an adhesive paper label giving notice of a price increase, and incidentally bearing the words " . . . is made from full cream milk." The packers were written and reminded of the necessity to comply fully with the order ; the suggestion being made that any superimposed label should itself state the particulars required by the Labelling of Food Order and the Pre-packed Foods Order. The packers undertook to use no superimposed labels in future.

Sample No. B2634, Fruit Preserving Tablets.

This informal sample consisted of a paper packet of pre-packed tablets. The packet bore a declaration in the form required by the Public Health (Preservatives) Regulations 1925 etc., and the product was stated to contain 60 per cent. of sulphur dioxide. In addition each tablet was stated to contain eight grains of sodium metabisulphite. The percentage of sulphur dioxide was found on analysis to be only 22 and there was thus a deficiency in sulphur dioxide to the extent of 63·3 per cent. of the stated amount. Further the tablets only weighed 7·5 grains on the average. In this case the deficiency may have been due wholly or in part to the exposure to the air of the tablets protected only by a paper packet. A further sample was not obtainable owing to stocks being sold out. Many other makes of similar tablets are packed in small glass bottles with screw caps.

BOROUGH OF ECCLES.

During the year 150 samples were received from the above Borough for examination under the Food and Drugs Act 1938.

Five samples were found to be adulterated.

Details of the samples examined are given in the following table :—

TABLE 13.

SAMPLES EXAMINED.

SAMPLES.	Number Examined.	Number Adulterated or otherwise giving rise to irregularity.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk	103	—	3	2·9
Butter	2	—	—	—
Margarine	2	—	—	—
Cooking Fat	2	—	—	—
Shredded Suet	1	—	1	100
Jam	2	—	—	—
Marmalade	2	—	—	—

TABLE 13.—*Continued,*

SAMPLES.	Number Examined.	Number Adulterated. or otherwise giving rise to irregularity.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Lemon Curd	1	—	—	—
Self-raising Flour	2	—	—	—
Oatmeal	1	—	—	—
Sugar	2	—	—	—
Malted Milk	1	—	—	—
Baking Powder	4	—	—	—
Ground Ginger	2	—	—	—
Mixed Spice	2	—	—	—
Malt Vinegar	2	—	—	—
Mustard	2	—	—	—
Arrowroot	1	—	—	—
Dry Flavouring	2	—	—	—
Gelatine	1	—	—	—
Tartaric Acid	1	—	—	—
Seidlitz Powders	2	—	—	—
Epsom Salts	2	—	—	—
Glycerine	2	—	—	—
Boracic Ointment	2	—	1	50
Sulphur Ointment	2	—	—	—
Castor Oil	2	—	—	—
	150	—	5	3·3

TABLE 14.

AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples.	Total Solids per cent.		Fat per cent.		Solids-not-fat per cent.	
January	7	12·26	12·75	3·64	4·01	8·62	8·74
February	11		12·07		3·50		8·57
March	10		12·12		3·53		8·59
April	8	12·06	11·75	3·43	3·30	8·63	8·45
May	16		12·08		3·40		8·68
June	10		12·30		3·60		8·70
July	6	12·10	12·12	3·44	3·49	8·66	8·63
August	8		12·02		3·43		8·59
September	7		12·18		3·41		8·77
October	6	12·34	12·54	3·63	3·74	8·71	8·80
November	10		12·24		3·59		8·65
December	4		12·26		3·56		8·70
	103		12·18		3·53		8·65

TABLE 15.

MILK ADULTERATION.

No.	Nature of Adulteration, etc.	Action Taken.	Remarks.
882	Deficient 3·3% milk fat....................................	Farmer cautioned....................	Formal sample.
907	Deficient 5·0% milk fat....................................	Producer written	Naturally poor in non-fatty solids.
994	Deficient 6·6% milk fat....................................	Supply kept under observation.	Further samples genuine.

In the following table will be found particulars of the various types of milk adulteration and the number of samples under each heading :—

Milks deficient in fat only	3 or 2·9%
Milks containing added water only	Nil
Milks deficient in fat and containing added water	Nil
	3 or 2·9%
Milks containing more than 3% added water	Nil
Milks 10% or more deficient in fat	Nil

TABLE 16.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration, etc.	Remarks.
892	Boracic Ointment	70% excess boric acid.	Packer cautioned.
988	Shredded Suet	Deficient 50·3% of the required amount of fat.	Vendor cautioned.

Sample No. 892, Boracic Ointment.

This informal sample was contained in a " tin " marked on the lid " Special Boracic Ointment." On analysis it was found to contain 1·7 per cent. of boric acid. Compared with the Boric Acid Ointment of the 7th Addendum to the British Pharmacopœia 1932, which requires 1·0 per cent. of boric acid, the sample contained an excess of 70 per cent.of the required amount. Alternatively, if the article was not the ointment described in the above B.P. Addendum, then the proportion of the active ingredient (boric acid) should have been stated on the label, as required by Section 11 of the Pharmacy and Medicines Act 1941. A letter of caution was sent to the packers, who undertook to take steps to prevent a repetition of the offence. The vendor's stock was withdrawn from sale.

Sample No. 988, Shredded Suet.

This informal sample represented a product prepared by a butcher. The vendor was warned that his product fell below the standard prescribed by the Food Standards (Shredded Suet) Order 1944. The product was withdrawn from sale forthwith.

Phosphatase Tests on Milk Samples submitted by the Borough of Eccles.

In addition to the milk samples examined under the Food and Drugs Act 1938, 25 samples were submitted for examination by the phosphatase test. The results obtained on these samples are tabulated below :—

Type of Milk.	No. of Samples.	Sufficiently heat-treated.	Insufficiently heat-treated.	Grossly under-treated.
Pasteurised	25	25	—	—
	25	25	—	—

BOROUGH OF STRETFORD.

During the year 187 samples were received from the above Borough for examination under the Food and Drugs Act 1938.

Eighteen samples were found to be adulterated.

Details of the samples examined are given in the following table :—

TABLE 17.

SAMPLES EXAMINED.

SAMPLES.	Number Examined.	Number Adulterated or otherwise giving rise to irregularity.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk	121	—	7	5·8
Butter	3	—	—	—
Margarine	3	—	—	—
Cooking Fat	3	—	—	—
Cheese	3	—	—	—
Sugar	3	—	—	—
Chocolate Cup	1	—	—	—
Drinking Chocolate	1	—	—	—
Cocoa	1	—	—	—
Medicated Chocolate	1	—	—	—
Coffee	4	—	2	50
Meat and Potato Pie	1	—	1	100
Sage and Onion Stuffing	2	—	1	50
Sponge Mixture	2	—	—	—
Arrowroot	2	—	—	—
Vinegar	2	—	—	—
Gelatine	2	—	—	—
Gravy Browning	2	—	—	—
Gravy Powders	2	—	—	—
Flavoured Cordials	2	—	—	—
Flavouring Essence	1	—	—	—
Colouring	1	—	—	—
Yeast Tablets	2	—	2	100
Table Jelly	2	—	—	—
Mustard Pickles	1	—	—	—
Lemon Crystals	1	—	—	—
Malt and Cod Liver Oil	2	—	—	—
Chocolate Laxative Tablets	2	—	1	50
Laxative Tablets	1	—	—	—
Tonic Tablets	1	—	—	—
Sulphur Tablets	2	—	1	50
Bicarbonate of Soda	2	—	—	—
Ground Almond Substitute	1	—	1	100
Gregory's Powder	2	—	—	—
Seidlitz Powders	3	—	2	66·6
Tincture of Iodine	1	—	—	—
Iodine Paint	1	—	—	—
	187	—	18	9·6

TABLE 18.

Average Composition of All Milks.

Month.	Number of Samples.	Total Solids per cent.		Fat per cent.		Solids-not-fat per cent.	
January	8	12·19	12·26	3·61	3·58	8·59	8·68
February	18		12·17		3·64		8·53
March............	6		12·21		3·60		8·61
April	20	12·07	12·10	3·49	3·53	8·58	8·57
May	5		11·97		3·33		8·64
June	5		12·03		3·47		8·56
July	16	12·20	11·92	3·56	3·27	8·64	8·65
August	13		12·52		3·92		8·59
September	4		12·30		3·55		8·75
October..........	13	12·36	12·33	3·70	3·68	8·66	8·65
November	12		12·36		3·70		8·66
December	1		12·70		4·00		8·70
	121		12·20		3·59		8·61

TABLE 19.

MILK ADULTERATION.

No.	Nature of Adulteration, etc.	Action Taken.	Remarks.
84	3·5% extraneous water F.Pt. (Hortvet) —0·497°C.	Formal samples genuine.........	Pasteurised milk.
85	2·3% extraneous water F.Pt. (Hortvet) —0·507°C.		
86	3·5% extraneous water F.Pt. (Hortvet) —0·497°C.		
88	2·3% extraneous water F.Pt. (Hortvet) —0·508°C.		
89	2·3% extraneous water F.Pt. (Hortvet) —0·497°C.		
155	Deficient 5·0% milk fat....................................	Vendor notified......................	Further sample genuine.
205	1·2% extraneous water F.Pt. (Hortvet) —0·519°C....	Further sample genuine	Heat-treated milk.

In the following table will be found particulars of the various types of milk adulteration and the number of samples under each heading :—

Milks deficient in fat only	1 or 0·8%
Milks containing added water only	6 or 5·0%
Milks deficient in fat and containing added water	Nil
	7 or 5·8%
Milks containing more than 3% added water	2 or 1·7%
Milks 10% or more deficient in fat	Nil

TABLE 20.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature Adulteration, etc.	Remarks.
147	Yeast Tablets	Unsatisfactory label	Packers written.
148	Yeast Tablets	Unsatisfactory label	Packers written.
165	Sulphur Tablets	Unsatisfactory label	Packers notified.
168	Chocolate Laxative Tablets.	Heavily infested with mould.	Stock surrendered.
201	Meat and Potato Pie.	Fermenting and unfit for human consumption.	Further stock withdrawn from sale.
226	Sage and Onion Stuffing.	No declaration of ingredients.	Old stock, no further stock available.
231	Ground Almond Substitute.	Sold " loose "	Referred to local Food Control Committee.
230	Coffee	Contained 30% chicory.	Formal sample taken.
238	Coffee	Contained 30% chicory.	Prosecution, dismissed under Probation of Offenders Act on payment of costs.
235	Seidlitz Powders	Contained 27·2% excess tartaric acid.	Formal sample taken.
239	Seidlitz Powders	Contained 22% excess tartaric acid and also 12·8% excess sodium bicarbonate.	Packers warned.

Samples Nos. 147 and 148, Yeast Tablets.

These samples were found on analysis to comply with the respective declarations of the amount of yeast present. In both cases the labels were unsatisfactory in that certain vitamins, in one case B_1 and B_2, and in the other " B_1-B_6," were mentioned without giving the " appropriate quantitative particulars " of each vitamin mentioned. (Pharmacy and Medicines Act 1941, Section 11.) Letters were written to the respective packers calling their attention to the points at issue. Assurances have been given in one case (*re* Sample No. 147) that the products would no longer be marketed, and in the other case (*re* Sample No. 148) that deliveries would be suspended until satisfactory labels were available.

Sample No. 165, Sulphur Tablets.

This informal sample of pre-packed sulphur tablets bore the following printed words : " Formula—Sulphur Sub. 5 grs. Acid Tart. ½ gr. Ol. Limetta Qs. (sic) Base Excip. ad to (sic) 12 gr." The average weight of the tablets was 0·889 gramme or 13·7 grains per tablet. On analysis the tablets were found to contain sulphur 29·4 per cent. and calcium carbonate 51·2 per cent. The sulphur found is equivalent to 4·04 grains per average tablet, amounting to a deficiency of 0·96 grains per tablet or 19 per cent. of the declared amount. The tartaric acid is pharmaceutically incompatible with the great excess of calcium carbonate, present presumably as the main ingredient of the tablet base. The label, therefore, fails to comply with the requirements of the Pharmacy and Medicines Act, 1941, Section 11. The packers were notified and undertook to amend the label suitably.

Sample No. 168, Chocolate Laxative Tablets.

This informal sample of pre-packed tablets was found to be heavily infested with mould and unfit for human consumption. The remainder of the vendor's stock was surrendered.

Sample No. 201, Meat and Potato Pie.

This formal sample was taken at the request of the vendor who alleged interference by an employee and suspected a chemical addition. The sample at the time of receipt was found to be in a state of active bacterial fermentation and was reported to be unfit for human consumption. No chemical addition was found. Similar pies were withdrawn from sale.

Sample No. 226, Sage and Onion Stuffing.

This informal sample was submitted in the carton in which it had been sold. The printing on the carton failed to comply with the Labelling of Food (No. 2) Order 1944, in that it contained no declaration of ingredients. On enquiry it was found that the carton was old stock and no similar stock remained in the shop.

Sample No. 231, Ground Almond Substitute.

This informal sample represented a product sold " loose," by retail. In composition it was suitable for use as a substitute ; but its sale by retail " loose " was an infringement of the Food Substitutes (Control) Order 1941. On enquiry the material was found to be a " licensed substitute " sold " wholesale " for use by confectioners in the preparation of their own products. The matter has been referred to the local Food Control Committee.

Sample No. 238, Coffee.

This sample was found to be adulterated with 30 per cent. chicory, and legal proceedings were instituted. At the hearing the defendant pleaded guilty and the case was dismissed under the Probation of Offenders Act on payment of 10s. 6d. special costs.

Sample No. 239, Seidlitz Powders.

These powders were found to contain 23 per cent. excess of tartaric acid and also 12·8 per cent. excess of sodium bicarbonate. The facts were reported to the Town Clerk with a request to issue a warning to the packers responsible.

Phosphatase Tests on Milk Samples submitted by the Borough of Stretford.

In addition to the milk samples examined under the Food and Drugs Act 1938, 87 samples were submitted for examination by the phosphatase test. The results obtained on these samples are tabulated below :—

Type of Milk.	No. of Samples.	Sufficiently heat-treated.	Insufficiently heat-treated.	Grossly under-treated.
Pasteurised........	38	38	—	—
Heat-treated	49	43	5	1
	87	81	5	1

Phosphatase Tests on Milk Samples submitted by Other Boroughs.

Twenty-four samples of milk were submitted during the year by the Borough of Prestwich for examination by the phosphatase test. All these samples were found to be sufficiently heat-treated.

One sample of milk was submitted during the year by the Urban District of Hazel Grove for examination by the phosphatase test. It was found to be sufficiently heat-treated.

RAG FLOCK ACTS, 1911 and 1928.

During the year four samples of rag flock and three samples of " wool flock " were submitted by the Borough of Stretford. One sample of rag flock contained 263 parts of chlorine in 100,000 parts of flock and did not therefore comply with the standard of cleanliness of 30 parts of chlorine in 100,000 parts of flock laid down in Article 1 of the Rag Flock Regulations 1912. The other three samples of rag flock complied with the Regulations.

The three samples of " wool flock " all contained more than 30 parts of chlorine per 100,000 but the opinion was expressed that they were not rag flock within the meaning of the definition.

One sample of " filling " was submitted during the year by the Salford Authority and was found to comply with the requirements of the Rag Flock Regulations 1912.

MISCELLANEOUS SAMPLES

(from all sources).

Contract Samples	57
Milk and Milk Products (complaints)	22
Miscellaneous Health Department (all types)	13
Sewer Grease	8
Soot Gauges	48
Sulphur Dioxide Candles	24
Swimming Bath Water	151
Water	49
Ice Cream	14
	386

CONTRACT SAMPLES

Bread	7
Cocoa	6
Floor Polish	4
Floor Sweeping Compound	5
Furniture Cream	4
Liquid Metal Polish	6
Lysol	3
Meat Extract	6
Scouring Powder	7
Scouring Tablets	2
Turpentine Substitute	7
	57

Fifty-seven samples were examined in connection with the commodities purchased by the Central Purchasing Committee. The chief consumers of the materials are the Health Department and the various City Institutions, and samples were examined primarily to ascertain whether they were in accordance with the relevant specifications.

MISCELLANEOUS HEALTH DEPARTMENT SAMPLES.

Spray Enamel.

Complaints were received from occupants of houses near a works used for assembly of electrical apparatus, that a fine cloud accompanied by an objectionable smell was emitted by the works into the back-yards and bedrooms of the houses. It was found that enamel was sprayed on to the electrical apparatus in the works, and for the safeguarding of workers the cloud and vapours caused by the spray were ejected by a fan into the open air. Analysis of the enamel showed that it contained a coal-tar spirit. More satisfactory means of disposing of the vapours by means of flues, were erected upon the electrical works.

Twigs from Allotments.

Complaints were received from allotment holders in the City, that a fine white dust emitted during windy weather by a large works outside the City was settling upon crops and had already caused damage to vegetables, and complete loss of a soft-fruit crop. An analysis of the dust showed the presence of soda ash, and examination of areas adjacent to the allotments led to the identification of the responsible factory. The matter was brought to the notice of the other Authority in whose area the works was situated. This nuisance later ceased on the installation of more efficient dust-removing plant by the works.

Grit in Cheese.

Purchasers of cheese complained that portions sold to them as their ration from a 5lb. block of imported processed cheese contained " bits of glass." Small shining particles were picked out of a sample of the cheese, and proved to be small crystals of calcium tartrate. This substance is harmless, but its presence constitutes a defect in quality. Attempts were made to trace any unsold stocks of similar cheese but nóne remained.

Ice Cream.

During the year under review the sale of " ice cream " was again permitted, following a period at the end of the war when manufacture had been forbidden. The Ministry of Food made allocations of sugar and fats to manufacturers who had made ice cream before the prohibition had been imposed. In general the use of liquid milk in ice cream was forbidden. Previous stocks of " ice-cream powders " and " cold-mixes " came into use, and a limited amount of skimmed milk powder was made available. When ice cream reappeared the public demand was considerable, and allocations of necessary ingredients were comparatively small. In the circumstances complaints arose in many areas of low quality ice-cream, and the Minister of Food was urged by representatives of many interests including manufacturers to fix a standard for the percentage of fat, sugar, etc. However, no such standard was fixed.

In the United States where ice cream is almost a regular item of diet, the percentage of fat is stated to be 12-14. Probably the average person in this country would find such a product too "rich." A reasonable amount of fat in ice cream in this country would be 8-10 per cent. and I would suggest a minimum of 6 per cent. A reasonable minimum for sugar would be 10 per cent. The solid ingredients of ice cream other than fat and sugar should be mainly derived from milk.

Fourteen samples submitted by inspectors from the three areas Salford, Eccles and Stretford were examined, and the percentage of fat and sugar are given in Tables A and B. It will be seen that 12 out of 14 samples failed to reach the suggested standard of 6 per cent. fat, and that eight out of 14 samples failed to reach the suggested standard of 10 per cent. of sugar. Among the

14 samples the following ingredients not derived from milk were detected in one or more cases :—gelatine, dextrinised starch, uncooked flour, soya flour, vegetable gum, maize starch, margarine fat.

TABLE A.

Fat %	*No. of Samples.*
0·1 to 0·5	7
0·5 to 1·0	1
1·0 to 2·0	1
2·0 to 3·0	2
3·0 to 4·0	Nil
4·0 to 6·0	1
6·0 to 8·0	Nil
8·0 to 10·0	2
	14

TABLE B.

Sugar % (*Sucrose*)	*No. of Samples.*
4 to 6	3
6 to 8	1
8 to 10	4
10 to 12	3
12 to 14	1
14 to 16	Nil
16 to 18	2
	14

SWIMMING BATH WATERS.

During the year more facilities were made available for swimmers, and the use of the baths was comparable to pre-war years. The system of continuous purification is in use, and samples from the baths were examined with the following Ministry of Health recommendations in view ("Purification of the Water of Swimming Baths," 1929) :—

1. The water issuing from the plant shall contain not more than 0·5 parts and not less than 0·2 parts per million of free chlorine.
2. Be definitely alkaline to methyl orange, but free from caustic alkalinity.
3. Be of a clarity so that a 19 S.W.G. platinum wire can be seen through a depth of six feet.
4. Fully aerated, sparkling and attractive in appearance.

Provided that the bath is not hopelessly overcrowded, the bacterial purity will then be approximately the same as that of drinking water. It is pointed out that the maintenance of an alkaline condition is important to neutralise the acid (continually formed from the aluminium salts and chlorine), which sometimes causes complaints of smarting eyes, often wrongly attributed to the presence of excess chlorine. A pH value between 7·0 to 8·0 will be adequate protection in this respect.

One hundred and fifty-one samples of swimming bath water were examined during the year, including four from the Borough of Eccles. Samples from the baths in use were tested once a week during the summer period extending from the beginning of May to the end of September, and once a month during the remainder of the year. Out of the total number of samples examined 65 showed slight variations from the standards of free chlorine and alkalinity indicated above. Three samples were entirely devoid of free chlorine and 18 samples showed a free chlorine content exceeding one part per million. Divergencies were brought to the notice of the Baths Superintendent.

DRINKING WATERS.

Forty-nine samples of water were examined during the year including the usual monthly analyses of the public water supply.

Salford obtains its water supply from gatherings grounds under the control of Manchester Corporation. Samples have been taken for analysis at several points in the City including Hope Hospital and Regent Road. The average results for the year are given in the following table, and it will be seen that the water supply in general possesses very little hardness and is of satisfactory chemical purity. Traces of free chlorine were found in all samples of the City supply, indicating satisfactory precautionary treatment. Several samples were taken in the Broughton area following the September floods, with a view to the detection of pollution of the mains by flood water, and no chemical evidence of pollution was obtained.

TABLE 21.

	Parts per 100,000	
	Pendleton Supply	Salford Supply
Total Solid Matter	4·22	8·89
Nitrates (as N_2)	0·01	0·06
Nitrites (as N_2)	Trace	Nil
Combined Chlorine	0·80	1·24
Free Chlorine	0·004	0·008
Free and Saline Ammonia (as N_2)	0·004	0·004
Albuminoid Ammonia (as N_2)	0·004	0·005
Oxygen absorbed from acid permanganate — 15 mins.	0·029	0·042
Oxygen absorbed from acid permanganate — 3 hours	0·057	0·090
Temporary Hardness	1·5	1·5
Total Hardness	2·2	4·0
pH Value	7·1	7·0

OTHER DETERMINATIONS.

Plumbo-solvency. The amount of lead found in the first litre drawn after the water had stood overnight in lead service pipes was as follows :—0·1 and 0·25 parts per million (12 hours standing) ; 0·4 parts per million (45 hours standing). These amounts are satisfactorily small.

Fluorine. The supply contained only negligible amounts of fluorine, amounting to less than 0·1 parts per million.

FERTILISERS AND FEEDING STUFFS ACT 1926.

Eight samples have been examined during the year, consisting of six samples of fertilisers and two samples of feeding stuffs. One sample of fertiliser and one sample of feeding stuff showed slight variations from the declared statutory statements, and in these cases the results were brought to the notice of the manufacturers concerned with a view to the amendment of the statutory statement. In the case of one sample of fertiliser no satisfactory statutory statement was available to the purchaser and the necessity of a statutory statement was brought to the notice of the vendor. The other samples satisfied the requirements of the Act.

PHARMACY AND POISONS ACT 1933.

Nine samples have been examined during the year. These consisted of five samples of ammonia solution and four samples of phenol disinfectant. Details of the samples are given below :—

One sample of ammonia solution was found to contain less than 5 per cent. w/w of ammonia and was, therefore, exempt from the labelling requirements. Another sample of ammonia solution was found to be deficient in ammonia to the extent of 10 per cent. of the declared amount. The packer of this product was requested by letter to ensure that in future the product would comply with the declaration. The other three samples of ammonia solution all agreed with the declarations, but the label on one sample was not " clearly and distinctly set out " as required by Section 16 (1) of the Poisons Rules. The matter was taken up with the packers, but it transpired they had already amended the label.

The four samples of phenol disinfectant were all found to be satisfactory.

ATMOSPHERIC POLLUTION.

Sulphur Pollution.

Two hundred and eighty-six tests have been carried out throughout the year at Regent Road by the volumetric sulphur method and 24 monthly tests at Regent Road and Ladywell Hospital by the lead peroxide method. In the former process, the sulphur dioxide present in the air is returned as parts per million, while by the latter method, atmospheric sulphur pollution is returned as milligrammes of sulphur trioxide per 100 square centimetres of exposed surface. Both processes show a very striking rise in the winter months, and the volumetric process, by which daily determinations are made, shows exceptionally high figures on foggy days, thus demonstrating the tenacity with which smoke pollution hangs over the City during these periods.

TABLE 22.

SULPHUR POLLUTION.

Month.	Milligrammes Sulphur Trioxide per 100 sq. cm. Daily Average.		Parts Sulphur Dioxide per million of air. Daily Average. Regent Road.
	Regent Road.	Ladywell Hospital.	
January	2·62	3·66	0 040
February	2·81	3·12	0·114
March	—	2·33	0·129
April	1·14	1·77	0·103
May	1·30	1·29	0·056
June	1·66	1·55	0·056
July	1·47	1·37	0·046
August	2·11	1·85	0·039
September	2·24	2·46	0·039
October	3·03	3·48	0·106
November	3·49	3·95	0·094
December	4·95	5·58	0·120

Examination of Soot Gauge Deposits.

The work of examining the deposits in the special gauges placed at various points in the City has been continued. Standard gauges are situated at Broughton Senior School, Salford ; Ladywell Hospital ; Drinkwater Park ; and at the Corporation Sanatorium at Marple, Cheshire.

In uniformity with the results expressed by other stations, of which there are a number scattered throughout Great Britain, the results are expressed in metric tons per square kilometre. The metric ton is equivalent to slightly more than the English ton, whilst there are 2·59 square kilometres to the square mile, so that to convert metric tons per square kilometre to English tons per square mile, it is necessary to multiply by 2·35, or roughly 2½.

Table 24 shows the average monthly results that have been obtained during the year. It will be observed that the deposits collected at Broughton Senior School, Ladywell Hospital and Drinkwater Park are very similar in amount and indicate a considerable amount of atmospheric pollution, whilst, as is to be expected, the deposit collected at Marple shows that the air there is relatively purer.

TABLE 23.

SOOT GAUGE OBSERVATIONS.

Monthly Averages—Metric Tons per Square Kilometre.

	Salford : Broughton Senior School.	Salford : Ladywell Hospital.	Salford : Drinkwater Park.	Marple : Nab Top Sanatorium.
Rainfall in millimetres	83·3	83·9	90·1	80·9
Tar	0·13	0·09	0·08	0·07
Carbonaceous matter other than tar	1·58	2·01	1·51	1·01
Ash	2·91	3·37	2·31	1·76
In-soluble Matter	4·62	5·47	3·90	2·84
Soluble Matter	2·92	2·98	2·80	2·15
Total Solids	7·54	8·45	6·70	4·99
Sulphates (Included in soluble matter)	0·99	1·10	0·97	0·66
Chlorides (Included in soluble matter)	0·83	0·81	0·92	0·58
pH	4·95	4·7	4·4	4·95

Perhaps the most noticeable feature of the results is the acid nature of the deposits. This is shown by the pH values of the water collected. The pH due to the carbonic acid in the air would be about 5·5. Figures below this, therefore, indicate an acid deposit, and higher figures an alkaline deposit. Considering that the Marple gauge is fairly well in the country and shows a general record better than those obtained in the City, its acid rainwater is noteworthy. This shows how widespread may be the drift of acid smoke from the cities.

TABLE 24.

pH VALUES FOR THE FOUR STATIONS.

Month.	Broughton Senior School.	Drinkwater Park.	Ladywell Hospital.	Nab Top Sanatorium.
January	4·0	3·9	4·1	4·4
February	4·7	4·4	4·4	4·5
March	5·3	4·5	4·4	4·9
April	5·3	4·4	4·7	4·4
May	6·0	4·7	5·3	5·1
June	5·0	4·3	6·0	6·0
July	5·3	4·5	4·4	4·5
August	4·4	4·5	4·4	4·4
September	5·0	4·4	4·4	5·1
October	5·6	5·2	5·2	5·1
November	4·6	4·3	4·3	6·0
December	4·2	4·2	4·3	5·0
Average for 1946	4·95	4·4	4·7	4·95

VENEREAL DISEASES SCHEME, ANNUAL REPORT 1946.

New Cases.

The number of new cases seen during 1946 was 2,955. This represents an increase of no less than 601 over 1945's figure of 2,354 which was already the highest figure recorded since the opening of the clinic.

Of the total of 2,955, 1,523 were found to be suffering from Venereal Disease in one form or another, and 1,432 were classified as non-venereal.

Venereal Diseases legally comprise Syphilis, Gonorrhœa and Chancroid. Non-venereal conditions seen include Non-Specific Urethritis, Balanitis, Warts, Paraphimosis and various types of Dermatitis.

All cases classified as non-venereal, and where a risk of infection exists, are tested and kept under observation during the incubation periods of Gonorrhœa and Syphilis.

The increase of 394 Venereal Diseases cases over 1945's figures is a reflection of the inevitable aftermath of war. Non-venereal cases seen were 17 per cent. more than in 1945.

Analysis of these figures, under the headings of separate diseases, reveals that the figure for Syphilis is up by 46 per cent. over 1945, and Gonorrhœa by 24 per cent. approximately.

Figures for non-venereal cases continue the previous trend and are again over 200 more than 1945.

Sex Incidence.

There were 1,160 males and 363 females suffering from Venereal Diseases during the year. As was to be expected, with demobilisation in full swing, the male figure is greatly increased but the female shows a slight drop from 1945. These figures include patients who have had previous treatment at other centres.

Fresh Infections.

A " fresh infection " is an infection in which the disease is under 12 months' duration, and an " old infection " is one over 12 months' duration.

Of 881 new male Venereal Disease cases, 855 were " fresh " infections, and of 339 female cases 283 were " fresh " infections. These figures do not include patients who have had previous treatment or congenital Syphilis cases.

Attendances.

Total attendances for 1946 were 43,875. Of this total 11,633 were intermediate attendances, and 32,242 were attendances for the Medical Officers' attention. The latter figure is more than 2,000 more than 1945, but intermediate figures continue to decline, reflecting the decreasing need for irrigations, etc.

Defaulters.

The total defaulter rate for this year was 3·41 per cent., again the lowest figure on record for the Clinic. Of dangerous (i.e., infectious) defaulters, the male percentage was 0·3, and the female 1·58. Both figures are the lowest ever recorded and are a tribute both to improved and shorter methods of treatment, and to the follow up work of the Clinic.

Of non-infectious defaulters, the male rate was 1·9 per cent., and the female 4·7 per cent.

Syphilis.

There were 369 new cases of Syphilis attending for the first time, and not previously diagnosed at other centres. Of this total 262 were cases in an early infective stage, i.e., primary, secondary, or Syphilis latent in the first year of infection.

107 cases were classified as chronic, including Endosyphilis Tertiary and Visceral Syphilis, Neurosyphilis and Congenital Syphilis.

Of the acute cases, the primary stage predominated (77 per cent.) in males, and the secondary stage (60 per cent.) in females.

As regards incidence of fresh infections of Syphilis, the male figures are up by almost 50 per cent. and the female by 20 per cent. (the highest figure recorded since 1928).

Congental Syphilis.

Total new cases of Congenital Syphilis diagnosed and treated at the Clinic since 1931, now number 315. 13 new cases were seen in 1946. A substantial increase on 1945.

TABLE IX.

Cases of Congenital Syphilis from Item 3 of Forms V.D. (R) Classified in Age and Sex Groups.

Year.	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Total.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1931	2	3	1	2	15	7	9	6	27	18	45
1932	—	2	1	5	9	13	2	3	12	23	35
1933	2	1	1	—	5	9	3	6	11	16	27
1934	3	—	1	1	3	4	6	—	13	5	18
1935	4	2	2	4	5	8	4	11	15	25	40
1936	3	1	—	—	3	2	6	4	12	7	19
1937	3	2	1	—	—	3	3	1	7	6	13
1938	1	1	—	—	1	—	2	6	4	7	11
1939	4	4	—	1	1	2	1	3	6	10	16
1940	1	—	—	—	3	1	1	1	5	2	7
1941	—	—	1	—	—	1	3	3	4	4	8
1942	—	6	1	2	—	4	6	6	7	18	25
1943	1	2	1	1	1	3	2	12	5	18	23
1944	—	—	—	—	2	1	2	2	4	3	7
1945	—	—	—	1	1	1	3	2	4	4	8
1946	3	4	—	1	1	—	1	3	5	8	13
TOTAL	27	28	10	18	50	59	54	69	141	174	315

Treatment of Syphilis.

The drugs in routine use for the treatment of Syphilis are :—

- (1) Penicillin.
    - (*a*) In Beeswax (2·5-3·5 per cent.) and Arachis Oil (or Ethyl Oleate).
- (2) Arsphenamine Diglucoside (Stabilarsan) Boots.
- (3) Meta-amino-para-hydroxy-phenyl-arsene Oxide (Mapharside).
- (4) Bismuth Oxychloride in Glucose.
- (5) Stabismol (oil soluble Bismuth).
- (6) Bismuth Salicylate (suspension in oil).

The treatment of Syphilis by Penicillin followed by Arsenic and Bismuth is routine in every acute case, and is well established. The use of Pencillin in male Syphilis has shortened the period of treatment to an average of 12 weeks, and is giving excellent results to date (1 year to 18 months' experience of tests of cure). In females results have not been so good, and it has proved advisable to give at least 3,000,000 units of Penicillin followed by two full 10 week courses of combined Arsenic and Bismuth. The later stage of Syphilis predominating in females when first seen is, I feel sure, partly responsible for this.

Up to the end of 1945 no toxic effects were noted. During 1946, 5 cases of generalised urticarial eruption occurring within a week after Penicillin treatment were noted. The eruptions were not severe and cleared up in a few days without need of hospitalisation.

It is as yet doubtful whether the oily base is responsible for this, but similar cases have been reported in the literature following pure Penicillin in saline or sterile water.

Penicillin should also be used with caution in the treatment of tertiary and visceral Syphilis, especially in middle-aged subjects, because of the probability of severe Herxheimer reactions.

The future trend, as Penicillin comes in greater supply, will be to give greatly increased doses in every case of Syphilis.

Chronic Syphilis.

Routine treatment in use comprises Arsenic (Stabilarsan, Mapharside, Tryparsamide, Stovarsol), Chlorostab and Collosol Iodine, and in occasional cases, Penicillin.

Cases that have had adequate treatment and are symptomless and at the same time Wassermann fast are lumbar punctured, and if Cerebro-Spinal Fluid findings are negative, are kept under observation without treatment.

During the year, 82 lumbar punctures were done on patients at Hope Hospital.

Gonorrhoea.

During 1946 there were 762 fresh cases of Gonorrhœa, comprising 579 male and 183 female. These figures show an increase of 107 over 1945 and of 245 over 1944.

Treatment.

This has been by Penicillin, either alone, or with one of the Sulpha group of drugs in combination. Treatment in routine use by Penicillin alone comprises one injection of 250,000 units of Penicillin in Oil. With this method a cure rate of 92-93 per cent. approximately, is achieved. The treatment of Gonorrhœa patients as out-patients makes accurate estimation of a relapse rate very difficult, and I feel sure certain " relapses " are really new infections.

In a small proportion of cases after treatment with Penicillin, the patient is left with a urethral discharge due to other organisms (Penicillin resistant) or abacterial in nature, and these cases are treated by an additional course of Sulphathiazole or Sulphadiazine and irrigations.

The same holds true for female cases. Tests of cure are done over a period of three months with blood tests at three and six months to exclude concomitant Syphilis.

Chancroid.

There were 100 cases during the year, an increase of 47 on 1945.

Female Contact Tracing (Almoner's Report).

Prior to July, 1946, the Almoner's section of the Venereal Diseases Department was carried on by Miss B. Van Gelder and one assistant. From the 1st July, when the present Almoner took over, the work has formed part of a larger department which embraces several other sections of Public Health work. As in the past, it is the aim of the Almoner to ensure that patients are not prevented by social problems from taking full advantage of the facilities for treatment and cure which the Clinic provides. The success of this work depends to a great extent upon the patient's attitude of mind. Patients who have been referred to the Clinic through no fault of their own are naturally often feeling very injured, upset and anxious as to any possible implications of their visit. Those patients who come as a result of their own indiscretions are likewise apprehensive, though in their case this feeling is frequently shown by a resentful attitude. Each patient is, therefore, interviewed by the Almoner on her first attendance at the Clinic, both before and after consultation and very real efforts are made to understand the patient's difficulties, and to create, if possible, a spirit of friendly confidence. Obstacles which might prevent attendance for treatment are discussed, and suggestions made as to their disposal.

Perhaps one of the most important roles of the Almoner in connection with Venereal Disease is to act as confidential adviser. In some cases a sense of fear or shame, often exaggerated, prevents patients from discussing their condition with friends or relatives, and these patients find termendous relief in being able to unburden their minds. The fact that they are assured that the matter is, and will remain, secret, and that the Almoner really has understanding and knowledge of their problems helps such patients very considerably.

Patients attend this Clinic from a wide area and in a number of cases it has been arranged to pay travelling expenses when the domestic finances were inadequate. In necessitous cases, assistance has been given with clothing and several patients have been helped by the provision of layettes for expected infants. Contact has been maintained with Voluntary Societies whose services could be used for the benefit of patients and suitable cases have been referred to them. The Almoner is called upon to do many and varied services for patients, including in one instance visiting the County Court office to collect the Separation Allowance paid into Court by a patient's husband. Convalescence has been arranged in suitable cases, and one woman who was invited to go to friends in the country for a holiday, was assisted by the provision of clothing from the Almoner's store.

New clothing seldom comes the way of a mother of a family, and it has been gratifying to observe the tonic effect of a new coat or bright jumper upon a woman who has become depressed by illness and by the continual struggle to provide for her children. The store of clothing given to the Department by the Women's Voluntary Service after the end of the war, largely consisted of new garments of a very good quality. Unfortunately the stock is now dwindling, but there is no doubt that the morale of many patients has received a considerable uplift by the distribution of this clothing. At the same time it has created and cemented friendly relations between the patients and the Department.

Particular attention is now paid to Ante-Natal cases and the quick follow-up both during pregnancy and after the birth of the baby, has resulted in a much closer check being maintained in these cases. Most of such mothers are keen to make sure that the infant will not suffer, and attend for treatment and tests as advised. The few who fail to do this are visited persistently by the Almoner, who endeavours by every means in her power to persuade the mother to attend. Unfortunately the secrecy which necessarily surrounds this subject prevents legal action being taken to compel parents to accept treatment for their children.

One of the most distressing features of the work is the difficulty of persuading young moral delinquents to continue treatment. Much time and attention is devoted to this matter, and close co-operation maintained with the Probation Officers with regard to follow-up work. It is impossible to keep in touch with some of these girls, usually aged 14-17 years who leave their homes for weeks or months at a time, and are only secured for treatment again when they have been apprehended by the Police, by which time they have often been reinfected.

During the year 15 cases which were notified to the Authority under Regulation 33B were visited by the Almoner, and attendance was secured in 12 cases. In the remaining cases, two patients had left the address given and could not be traced, and in the third, the information given was insufficient to identify the patient.

In cases which default on treatment, the follow-up is undertaken promptly. In many instances a letter is sufficient to bring a patient back, and this method has, of course, to be used when the patient resides in outlying areas. In other cases, visits are made and remade until the patient either comes for treatment or convinces the Almoner that no amount of effort will bring her. When visiting the Almoner is confronted with many problems of difficulty and hardship. Sympathetic discussion, sound advice, sometimes a little coaxing or even occasionally threatening, all help to impress the patient with the need to continue treatment and to induce her to return.

The following statement shows the work done in visiting defaulters :—

During 1946, 914 visits were made in connection with 257 patients.

On 518 occasions the patient was not contacted, but 70 of these visits were successful in that the patient returned for treatment as a result of the visit.

79 per cent. of the patients seen by the visitor returned for further treatment.

Male Contact Tracing and Defaulters.

This work, instituted first in 1944, has been continued with success. The work is done now by two male nurses at the Clinic, and the bulk of it consists of visiting dangerous defaulters (after letters have failed).

Considering the percentage of shifting population (i.e., Merchant Seamen) and of wrong addresses, the degree of success obtained is considerable and makes the work well worth while.

The following short table illustrates the results obtained for the year :—

	Sy.	Gc.	Chancroid.	N.V.	Services.	Total.
1. No. of patients visited	43	36	2	8	75	164
2. No. of patients contacted...	25	16	1	1	54	97
3. No. of contacts attending subsequently	16	14	1	1	36	68

The number of visits has increased from 101 to 164, and 70 per cent. of defaulters contacted subsequently attended for treatment. It must be emphasised that this work is confined largely to the dangerous, i.e., infectious type of case.

In-patient Accommodation.

Male and female wards at Hope Hospital have been in full use during the year. The present trend is likely to be towards less hospitalisation and more out-patient work—the result of the successful use of Penicillin in an oily base.

Both wards are visited by the Venereal Diseases Officer and the Assistant Medical Officer.

A Dermatological Out-patients' Service is available weekly at Hope Hospital (Dr. Gill), and the children's dermatological wards are also visited weekly. The work is increasing steadily and there is still scope for expansion.

Dr. Blades has continued to attend the " Ailments for Women " Clinic weekly.

General Observations.

The Salford Municipal Clinic is one of the largest " ad hoc " Clinics for the treatment of Venereal Diseases in this part of the country and its equipment is complete and modern. The Venereal Diseases Officer is frequently consulted by neighbouring authorities on Venereal Diseases problems.

Post graduates attend the Clinic for post graduate instruction to obtain the Ministry of Health or University Certificates and during the past year 14 attended for this instruction.

Lectures and clinical demonstrations are given regularly now to the nursing staffs of the following hospitals :—

(1) Hope Hospital, Salford.
(2) Lake Hospital, Ashton-under-Lyne.
(3) Park Hospital, Davyhulme.

It will be recalled (in the report for 1945) that routine sterilisation of all syringes by boiling, in place of spirit, was being undertaken in an effort to cut down the incidence of infective hepatitis. This has been done during 1946 and the results have been gratifying.

During the year 6 cases of infective hepatitis occurred (out of 44,000 attendances), compared with 23 in 1945 (out of 43,000 attendances).

Another important step forward which is to begin shortly is the routine use of Gonococcal Cultures as a diagnostic aid and as a routine test of cure. This is a particularly valuable diagnostic aid and test of cure in female Gonorrhœa, and brings the Clinic into line with the best and most progressive of modern practice.

APPENDIX I.

Return Relating to all Persons who were Treated at the Treatment Centre at Salford during the Year en the 31st December, 1946.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Non-venereal or undiagnosed conditions.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Tot
1. Number of cases on 1st January under treatment or observation	347	345	10	—	211	180	191	133	759	658	1,4
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	12	7	—	—	2	—	—	—	14	7	
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from :—											
Syphilis, primary	130	30	—	—	—	—	—	—	130	30	1
,, secondary	35	66	—	—	—	—	—	—	35	66	1
,, latent in 1st year of infection*	11	4	—	—	—	—	—	—	11	4	
,, all later stages	25	55	—	—	—	—	—	—	25	55	
,, congenital	5	8	—	—	—	—	—	—	5	8	
Soft Chancre	—	—	100	—	—	—	—	—	100	—	1
Gonorrhœa, 1st year of infection	—	—	—	—	579	183	—	—	579	183	7
Gonorrhœa, later	—	—	—	—	—	1	—	—	—	1	
Non-venereal conditions	—	—	—	—	—	—	1,004	356	1,004	356	1,3
Conditions remaining undiagnosed at 31st Dec.	—	—	—	—	—	—	—	—	—	—	—
4. Number of cases dealt with for the first time during the year under report known to have received treatment for the same infection, or to have been under observation, at other Centres, or Service Hospitals, or by General Practitioners approved under Ministry of Health Circular 2226	149	14	6	—	120	2	70	2	345	18	3
Totals of Items 1, 2, 3 and 4	714	529	116	—	912	366	1,265	491	3,007	1,386	4,3
5. Number of cases discharged after completion of treatment and final tests of cure or after diagnosis as non-venereal	70	28	68	—	317	183	798	367	1,253	578	1,8
6. (*a*) Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	7	4	—	—	—	—	—	—	7	4	
,, secondary	—	14	—	—	—	—	—	—	—	14	
,, latent in 1st year of infection*	1	—	—	—	—	—	—	—	1	—	
,, all later stages	6	13	—	—	—	—	—	—	6	13	
congenital	3	2	—	—	—	—	—	—	3	2	
Soft Chancre	—	—	1	—	—	—	—	—	1	—	
Gonorrhœa, 1st year of infection*	—	—	—	—	2	4	—	—	2	4	
Gonorrhœa, later	—	—	—	—	—	—	—	—	—	—	
6. (*b*) Number of cases under treatment or observation which died :—											
From the disease	2	2	—	—	—	—	—	—	2	2	
From treatment	—	—	—	—	—	—	—	—	—	—	
From other causes	1	3	—	—	—	—	—	—	1	3	
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure	17	5	2	—	23	36	—	—	42	51	
8. Number of cases transferred to other Centres, or to institutions, or to care of private practitioners	131	18	24	—	221	9	268	3	644	30	6
9. Number of cases remaining under treatment or observation on 31st Dec.	476	430	21	—	349	134	199	121	1,045	685	1,7
Totals of Items 5, 6, 7, 8 and 9 (These totals should agree with those of Items 1, 2, 3 and 4)	714	529	116	—	912	366	1,265	491	3,007	1,386	4,3
10. Number of cases in the following stages of syphilis **included in Item 6** which failed to complete one course of treatment of either penicillin or of arsenic and bismuth :—											
Syphilis, primary	1	—	—	—	—	—	—	—	1	—	
,, secondary	—	5	—	—	—	—	—	—	—	5	
,, latent in 1st year of infection*	—	—	—	—	—	—	—	—	—	—	
,, all later stages	—	4	—	—	—	—	—	—	—	4	
,, congenital	—	1	—	—	—	—	—	—	—	1	

APPENDIX I—*continued.*

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED THE 31ST DECEMBER, 1946.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Non-venereal or undiagnosed conditions.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
1. Number of attendances:— (*a*) for individual attention of the medical officer(s)........	8,457	10,099	539	—	5,537	2,075	4,069	1,466	18,602	13,640	32,242
(*b*) for intermediate treatment, *e.g.*, irrigation, dressing........................	613	—	326	—	3,104	3,911	2,163	1,516	6,206	5,427	11,633
TOTAL ATTENDANCES	9,070	10,099	865	—	8,614	5,986	6,232	2,982	24,808	19,067	43,875
2. In-patients:— (*a*) Total number of persons admitted for treatment during the year	80	93	3	—	9	5	11	6	103	104	207
(*b*) Aggregate number of "in-patient days" of treatment given	992	1,484	60	—	145	65	162	82	1,359	1,631	2,990
							Other Diseases.				
							M.	F.			
3. Number of cases treated with penicillin..............................	207	242	—	—	611	197	24	39	842	478	1,320

	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
4. Number of cases of congenital syphilis in Item 3 above classified according to age periods.....	3	4	—	1	1	—	1	3	5	8

	Microscopical.		Cultural for Gonorrhœa.	Serum.		Cerebro-spinal fluid.	Others for diagnosis of Venereal Disease. Kahn Tests.
	for Syphilis.	for Gonorrhœa.		for Syphilis.	for Gonorrhœa.		
5. Pathological Work:— (*a*) Number of specimens examined at, and by the medical officer of, the Treatment Centre..........	618	6,289	—	—	—	—	—
(*b*) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory........	—	—	117	5,762	1,241	82	5,762

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Salford.	Manchester.	Lancs. C.C.	Cheshire C.C.	Bolton.	Oldham.	Other Areas.	Seamen.	Total.
Number of cases from each area included under the following headings in Item 3:—									
Syphilis..	201	40	104	4	3	1	2	14	369
Soft Chancre	42	14	24	2	—	1	1	16	100
Gonorrœha...	336	111	189	21	6	1	5	94	763
Non-venereal and undiagnosed conditions..	646	176	340	27	10	6	21	134	1,360
TOTAL	1,225	341	657	54	19	9	29	258	2,592
Total number of attendances of all patients residing in each area............	24,617	5,596	10,969	675	352	33	328	1,305	43,875

* " Syphilis, latent in 1st year of infection," applies to cases presenting no clinical sign of syphilis but discovered (by blood test, etc.) to have contracted this disease within the preceding 12 months.

DOMICILIARY MIDWIFERY, MATERNITY AND CHILD WELFARE.

This year has been marked by a steady increase in the Birth Rate. The total number of births for the year was 3,952, as compared with 3,076 in 1945, and 3,297 in 1938, the last complete year before the war.

The Infantile Mortality Rate shows a new low record, being 53 per 1,000 live births. The total number of infant deaths was 198. As in former years the principal causes of these deaths were pneumonia and bronchitis, prematurity and gastro-enteritis. More than 56 per cent. of the deaths occurred in the first month of life and 63 per cent. of these in the first week.

Still-births show an increase of 21 on the figures for 1945. Sixty-six were notified from hospital, 35 by the Domiciliary Midwives (including the Midwives from the Royal District Nurses' Home), six from other authorities and three by a Nursing Home. Seven of these cases were from outside areas. The corresponding figures for 1945 were 53 from hospital, 22 by Domiciliary Midwives (including the Midwives from the Royal District Nurses' Home), two from private practitioners, eight from a Nursing Home, and four from other authorities. Twenty-seven of these cases were from outside areas.

Fourteen maternal deaths occurred in the City. Twelve occured in Hope Hospital, one on the district and one in a Nursing Home. The causes of these deaths are given on another page.

DOMICILIARY MIDWIFERY SERVICE.

During the year 25 midwives were employed in the Midwifery Service. These included three midwives employed by the District Nursing Institution and two temporary relief midwives who were appointed because of the increasing number of cases being booked.

The total number of cases attended by these midwives was 1,964, as compared with 1,509 in 1945. In 211 of these cases the midwife was acting as a maternity nurse. Gas and Air Analgesia was administered in 107 cases.

Taking into consideration the amount of time taken up by annual leave, sick leave, leave of absence, post graduate course and analgesia training, the average number of cases taken by each midwife during the year worked out at 93·11, which is considerably in excess of the figure of 66 recommended in the report of the Rushcliffe Committee.

In order to relieve the midwife of some of this increased work the Central Midwives Board reduced the period during which the midwife must attend a lying-in mother from 14 days to 10 days.

The total number of domiciliary visits paid by midwives were as follows :—

Ante-natal visits	5,254
Visits during the puerperium	32,111
Special visits	1,062

Midwives' Ante-Natal Clinics.

During the year it was found necessary to hold another session, making a total of seven sessions held each week. The number of attendances at these sessions was 7,487 as compared with 4,954 in 1945.

Ophthalmia Neonatorum.

Nineteen cases of Ophthalmia Neonatorum were notified during the year. Ten cases were notified by the staff of Hope Hospital and nine were infants attended by Municipal Midwives. Four of the latter group of cases were transferred to the Royal Eye Hospital, Manchester, and five were treated by the staff of the District Nursing Association. All 19 cases made a satisfactory recovery.

Pemphigus Neonatorum.

Two cases of Pemphigus Neonatorum were notified—one occurred in the practice of a midwife and one was notified from hospital.

Both cases recovered.

Puerperal Pyrexia.

Sixty-eight cases of Puerperal Pyrexia were notified during the year, more than double the number of cases notified in 1945. The increase is chiefly in hospital cases and in cases occurring as a result of abortion.

48 cases were notified from hospital.
1 case was notified from a nursing home.
10 cases occurred in domiciliary midwives' practices.
9 cases were notified by general medical practitioners (all were the result of abortion and were removed to hospital).

Beds are provided for the treatment of these cases at Ladywell Hospital.

Emergency Unit,

The " flying squad " was called out to seven cases.

Care of the Premature Baby.

For the greater part of the year we have been without a Premature Baby Nurse. There has been an increase in the number of cases notified. One hundred and two cases were notified by the Municipal Midwives. Ninety-three of these were still alive at the end of one month. Eighty-five of them were cared for entirely at home.

The special cots and other equipment were lent out where necessary.

PUBLIC HEALTH NURSING SERVICE.

During the year there have been frequent changes in the staff of the Health Nursing Service. Five Health Visitors resigned and one retired on superannuation. Five new Health Visitors were appointed. Four Clinic Nurses resigned and one temporary appointment was terminated. Two Clinic Nurses were transferred to other sections of the department—one to the Municipal Midwifery Service and one to School Nursing.

The only remaining Tuberculosis Visitor resigned towards the end of the year and will be replaced by a qualified Health Visitor early in 1947.

It is interesting to speculate on how the Report of the Rushcliffe Committee on Nurses Salaries is going to affect the staffing of the Health Nursing Service in a City like Salford. Now that Public Health Nurses are being paid the same salaries all over the country, it is not unnatural that these nurses should be attracted to areas where they can work in more pleasant surroundings and where the work is less arduous than it is in an area like Salford. Frequent changes in the personnel of the Health Visiting Staff are not good for Child Welfare. It takes at least two years for a Health Visitor to get to know her area well. In industrial areas like Salford the work is difficult and sometimes depressing. For this reason the case load for each Health Visitor should be less in these areas than in the " better " areas. Some inducement should be offered to attract a good type of Health Visitor either by way of increased renumeration, or by extending the period of annual leave.

During the five years from 1941 to 1946, the child population in Salford under the age of five years increased by 3,667. The case load for each Health Visitor has increased from 661 in 1941 to 900 in 1946, and clinic sessions have increased from 20 per week to 30 per week. These figures are based on an establishment of 15 Health Visitors for Maternity and Child Welfare work. The result of these increases has been that the home visiting—the most important part of a Health Visitor's work—tends to be neglected. At least 60 per cent. of a Health Visitor's time should be devoted to this part of her work. Instead, in 1946, only 25·9 per cent. of each Health Visitor's time was spent in home visiting. This position, although serious, has been improved somewhat by the co-ordination of services scheme, which, by allowing combined duties to be undertaken in most areas, has prevented overlapping of services, has saved time, and has made possible a redistribution of families, which has resulted in a reduction of the actual case load for each Health Visitor to approximately 780. Many of the additional duties which have devolved upon the Health Visitor in recent years have been allocated to Clinic Nurses, who have proved to be of great value to the service. Such assistance is, of necessity, confined to clinic work as Clinic Nurses do not do any home visiting except for the purpose of Diphtheria Immunisation.

School Nursing.

Combined Health Visiting and School Nursing is undertaken in three wards in the City—Kersal, Mandley Park and Ordsall, by six Health Visitors. Schools have been visited and each of the 4,600 children examined every term for cleanliness and other purposes. The Health Visitors also assist at the medical examination of these children.

During the year the staffing of the School Medical Section of Murray Street Clinic was transferred to the combined Health Visiting and School Nursing Staff.

Nursery Schools.

Since May, the five Nurseries which were transferred to the control of the Education Department and are now used as Nursery Schools have been visited daily by Health Visitors. The appointment of two Health Visitors/School Nurses was authorised for the work but only one appointment has been made.

Nursery Classes.

Routine general inspection by Health Visitors are carried out once monthly.

Tuberculosis Visiting.

Tuberculosis visiting in three-fourths of the City was undertaken by Health Visitors.

Student Health Visitors.

Only three of the four students originally appointed in 1945 under the Council's Scheme entered for training. The fourth student, whose contract was cancelled as she had been awarded a scholarship, agreed to serve for a period of six months after completion of her training.

All three students were successful in obtaining the Health Visitors' Certificate in 1946.

Four students commenced training in October, 1946.

Diphtheria Immunisation.

In October, 1946, a Diphtheria Immunisation Campaign was carried out in the City, which was unlike any other previous undertaking, and which proved to be most successful.

None of the orthodox methods of conducting a campaign were used. There were no public lectures, film shows, loudspeaker vans or exhibitions; there was no house-to-house visiting and there was no mobile unit.

Each Health Visitor was provided with a small box containing sterile equipment for carrying out immunisation in the home, and during her home visiting she followed up routine advice by offering immunisation there and then. The results were significant. Of a total of 1,529 children whose immunisation was completed in November and December, 1,100 were completed in the homes by Health Visitors. In ten weeks the Health Visitors achieved a figure which under former systems could not have been reached under eight months. They were largely responsible for raising the percentage of children immunised from 61 per cent. to 71 per cent.

Post Graduate Courses.

Members of the Health Nursing Service attended Post Graduate Courses held at Manchester and Oxford.

Health Education.

Teaching in Schools.

A series of lectures on the Public Health Services were given by a Health Visitor to a mixed class of senior school children attending Leicester Road School during the term commencing May, and to a class of girls at Trafford Road School during the term commencing September.

Talks to Outside Organisations.

Frequent requests are made from different organisations, particularly women's organisations, for speakers from the staff of the Department.

MATERNITY AND CHILD WELFARE CLINICS AND CENTRES.

Ante-Natal and Post-Natal Clinics.

With the increase in the birth rate, the attendances at all ante-natal clinics show an increase—the total attendances (including midwives' clinics) being 14,501, as compared with 10,300 in 1945. Additional sessions are needed particularly to relieve the clinics held at Regent Road and for midwives' clinics. Provision could be made for these at Encombe Place and Ordsall Centres by making some structural alterations—provision of cubicles, etc. Additional sessions also require additional staff.

Attendances at post-natal clinics do not show much change. The special post-natal clinic was continued during the year at the Royal District Nurses' Home, 59 of the mothers attended by the midwives and pupils from this institution returned with their infants for a post-natal examination.

Child Welfare Centres.

Figures showing the comparative attendances at Infant Welfare Sessions from 1941 are of interest, and are appended. I would draw attention particularly to the figures for the Langworthy Centre, which is held for three sessions weekly, in most unsatisfactory premises. In 1939 plans for a new centre for this area were passed and approved by the Minister of Health. The need for this new centre is greater than ever.

The steady increase in the attendances at Hope Clinic show how much a centre in that area was required.

Comparative Attendances at Individual Clinics of Children under 1 Year of Age.

	1941	1942	1943	1944	1945	1946
Regent Road............	2,046	2,255	2,207	2,497	2,324	3,454
Broughton................	4,066	4,230	4,604	4,864	4,246	5,352
Police Street	4,398	4,100	4,685	4,555	3,768	4,860
Ordsall.....................	2,120	2,229	2,160	2,919	2,690	2,698
Encombe Place	2,250	2,313	2,721	2,294	2,211	2,229
Langworthy	3,896	4,842	6,358	5,538	4,292	6,164
Height	1,991	2,419	2,678	3,321	2,444	2,835
Hope	...	...	1,139	2,035	2,787	3,459
Crescent...................	...	...	...	811	1,156	1,015
TOTALS.........	20,767	22,388	26,552	28,834	25,918	32,374

Comparative Attendances at Individual Clinics of Children 1 to 5 Years of Age.

	1941	1942	1943	1944	1945	1946
Regent Road............	1,810	1,661	1,032	845	1,315	1,558
Broughton................	2,921	3,292	1,799	1,259	1,462	1,300
Police Street	3,288	4,054	2,207	1,763	2,114	1,999
Ordsall.....................	1,113	1,453	1,006	1,204	1,533	1,324
Encombe Place	746	1,113	371	526	638	875
Langworthy	1,279	2,481	1,726	2,640	2,154	2,354
Height	1,400	1,494	898	585	1,185	1,051
Hope	...	...	236	299	678	1,021
Crescent...................	...	...	...	77	106	137
TOTALS...........	12,557	15,548	9,275	9,198	11,185	11,624

Breast Feeding Clinic.

There has been considerable increases in the attendances at this clinic during the year. Many mothers have come for advice regarding " overfeeding " and the fact that they have too much breast milk. They have received the required advice and help and as a result the infant has been fed satisfactorily. A number of premature babies have been referred to the clinic. Some of them were completely breast fed, but a greater number had to have a complementary or supplementary feed.

The total number of mothers who attended during 1946 was 222. This is more than twice the number who attended in 1944 or 1945.

As in previous years each case has been "followed up" by the Health Visitors and a special report made when the infant reached the age of six months as to whether breast feeding had been wholly or partly successful, or if it failed entirely. The following table gives the result of the "follow-up":—

	Breast Fed.	Partly Breast.	Failed.	No Report.	Died.
3 from 1945	...	1	1	1	...
56 June-December, 1945	15	13	20	6	2
123 January-May, 1946	45	23	33	20	2
182	60	37	54	27	4

The cases on whom reports are given include 56 mothers whose infants were born between 1st June and 31st December, 1945, 123 whose infants were born between 1st January and 31st May, 1946, and three carried over from the 1945 report.

The 27 cases for whom there is "no report" are mothers whose infants were born in Salford homes or hospitals and have since left the district or gone back to their own homes.

Thirteen premature babies born between June, 1945, and May, 1946, were referred to the clinic. Of these four were wholly breast fed, one partly breast fed, two failed, two died and there was no report regarding the remaining four.

One baby with a cleft palate was sent. This was partly breast fed.

The cases were referred as follows:—

95 by Medical Practitioners (usually Maternity and Child Welfare Officers).
68 by Midwives (mostly from Hope Hospital).
16 by Health Visitors.
3 by an unknown source.

Psychological Clinic.

Following the experiment which was carried out for three months at the Pendleton Child Welfare Centre, a Psychological Worker (Miss Schofield) was appointed in May to the Regent Road Clinic to hold one session weekly. This was so successful that a second weekly session was started at the Broughton Clinic.

Cases are referred by Medical Officers and Health Visitors' Talks are given to the mothers in the clinic waiting rooms and to expectant mothers in the ante-natal clinics.

Fifty-five children were seen at Regent Road and 12 at Broughton.

Many of the cases seen were children with feeding difficulties and in almost every case the mother was over-anxious. A number of the young mothers had read books on up-to-date methods of child care, but failed to take into account individual differences for which allowance should be made. Usually the mothers reacted sensibly when asked to make an effort to be calm and less anxious about the feeding. Quite a good proportion reported improvement when they became less anxious. In some instances it was felt that attendance at a nursery or nursery class would give the child scope for happier activity with other children. Many parents remarked that children ate well when they were happily engaged.

The " housing problem " in Salford is particularly acute and many psychological problems arise in parents and children as a result of unhappy living conditions where mothers and children are frustrated because they are living with grandparents, relatives or other people, and also in many cases where children live on dangerous roads or have little or no room to play. Such frustration was the cause of aggressive or unsuitable behaviour in a number of cases seen. The Day Nursery or Nursery School can be of real service in such cases, but the nursery is not, however, the solution to every problem. Children need the maternal care of the mother for some part of the day and also the friendship of the father, if they are to have their three vital needs—Security, Significance and Love—satisfied. Where one or more of these needs is not satisfied, problems occur. Mothers and the few fathers seen, were very willing to co-operate when explanations were given.

Several children had problems which dated from the time when the father returned from the Forces. The children resented the attention given to the father by the mother, after having had her sole attention for a long period. The birth of another child was another frequent cause of jealousy and aggressive behaviour.

Unhappy relationships accounted for some nervous difficult children. Most of these children suffered from feelings of insecurity and this was shown in the nocturnal calls for the mother in the enuretics. It was considered that some of the enuretic's problems were due to the anxious mothers, who had fussed unduly about cleanliness training. A few of these children became dry after tonsillectomy ; the toxic condition may have been responsible to a certain extent.

Play-therapy with sand, water and simple materials was often prescribed and explanations given as to the ways in which children could express their pent-up emotions in a happy way. A few parents had sacrificed much to buy elaborate toys, but they admitted that their children were often much happier with a bag of " old junk," and many problems vanished when parents provided for such activity.

The absence of fathers during the war years meant that many boys got an overdose of mother or of womenfolk. These boys were sometimes expected to behave the same as some of the quieter and more docile girls. They showed their frustration in different ways—fears, aggressive behaviour, day-dreams, etc. A more courageous way of life was indicated where the boy was fearful, and more vigorous activity where there was frustration.

In the Ante-Natal Clinics some young expectant mothers admitted that their fears had been stimulated by the morbid gossip of relatives and friends. They brightened considerably when it was suggested that pregnancy was like " blossom time " and we should never think of a tree in blossom or in fruit, as ill. They asked to be allowed to come for help if they had further fears. They were all grateful for the opportunity of talking over their difficulties, and for the advice given about the happy mother's ability to breast feed her baby far better than the anxious or unhappy mother.

In both clinics almost every parent or relative expressed gratitude for the opportunity of talking over their difficulties with a person whom they felt was sympathetic.

Dinners for Expectant and Nursing Mothers.

This service has been most efficiently carried out by the members of the Ladies' Public Health Society, and their friends. Attendances have been good at the Pendleton and Ordsall Centres.

At Encombe Place Centre where it had been in abeyance since 1940 the service was restarted in January but unfortunately the attendances were so poor that the dinner centre was closed down.

Birth Control.

Twenty-seven cases were referred by Medical Officers to the Manchester, Salford and District Mothers' Clinic, and 18 attended.

Physiotherapy.

The work in this department has been very much handicapped during the year on account of shortage of staff and also of unsuitability of premises, particularly at Police Street Clinic where the work undertaken, not only in the Physiotherapy but also in other departments, has far outgrown the space available.

The Sunlight Clinic has been kept going by combining the treatment of school children and infants at the same time. This leads to too large a number being treated at one session, and other departments complain of the noise and inconvenience caused. Only the most urgent cases have been taken for remedial exercises and massage, and this has meant that minor deformities have not always been given treatment.

Altogether 4,888 children attended for treatment—2,780 for artificial sunlight, 568 for massage and exercises, and 1,540 for Neumann Neurode Exercises. The conditions for which the children are most frequently referred for treatment are :—

Rickets.
Recurring bronchitis and pneumonia.
Respiratory catarrh.
Cervical adenitis.
Debility.
Insomnia and general irritability.

Some of the mothers attending the Ante-Natal Clinics have been referred for Sunlight treatment.

Sessions for ante-natal and post-natal exercises were also held, but these have had to be discontinued because of shortage of staff.

Neumann Neurode Exercises.

These exercises for infants and toddlers were recommenced in March when a full-time worker was appointed. Sessions are held twice weekly at Regent Road, Broughton, Pendleton and Ordsall Centres and at Hulme Street Day Nursery. The object of these exercises is prevention rather than treatment. The infant is trained to a sequence of exercises from the time it is three months old. The exercises have also been taught for such conditions as genu varum, genu valgum, torticollis, flat feet and general debility with good results. Particular attention has been given to cases of spastic paralysis which have appeared to be hopeless. These children after treatment have shown considerable improvement and the mothers have been encouraged by the fact that some definite form of treatment has been prescribed. One case of spastic paralysis following cerebro-spinal meningitis showed marked improvement in general condition both nervous and physical.

THE UNMARRIED MOTHER.

During the year 101 illegitimate pregnancies were notified to the Department and of these 27 were married women.

In 1945 the total number notified was 115, of which 47 were notified from the hospital. The 11 notifications from the Voluntary Moral Welfare Associations are a sign of increasing co-operation with these organisations.

Ninety-six were interviewed at the Health Department and five in their own homes.

Twenty-nine made pre-natal applications to have the infants adopted, but 18 of these were cancelled in the post-natal period.

In 1945, 60 women made application to have their infants adopted. The reason for this decrease may be that putative fathers are in most cases local men and the mothers have now a better chance of getting Affiliation Orders.

Close co-operation is maintained with various voluntary associations providing help for these cases. We are particularly indebted to the Catholic Rescue and Protection Society for beds in St. Teresa's Home, the Salvation Army for accommodation in Crossley Hospital, and Oakhill, and to the Diocesan Council for Moral Welfare for beds in the Simpson Hill Maternity Home at Heywood.

Special mention must be made of Sister Francis' unfailing co-operation at St. Teresa's Home, not only in helping girls of the Catholic faith but those of other denominations as well.

THE ILLEGITIMATE CHILD.

A special register is kept of all the known illegitimate children in the City. At the end of the year there were 540 children on this register. These were classified as follows :—

Conditions of Care.	
Satisfactory	214
Fairly satisfactory	252
Unsatisfactory	74

Notification of the removal of illegitimate children whether from Oakhill or St. Teresa's Home or individual homes in the City are sent immediately to the Medical Officer of Health of the area to which the child has been removed, with a request that this removal be confirmed. It has thus been possible to keep a fairly accurate record of the whereabouts of these children.

The following table shows the number of children so removed :—

	Number Discharged.	Number not Traced.	No Address Available.
1. St. Teresa's Home	63	2	...
2. Oakhill..................................	50	1	...
3. Individual Homes	61	7	8

INFANT LIFE PROTECTION.

The Foster Children in the City are divided into two main groups :—

1. Those cared for in " normal " homes.
2. Those cared for in Institutions.

1. " Normal " Homes.

At the end of the year there were six foster children and six foster mothers on the register.

During the year there were 10 children placed on the register and 10 removed from it.

One foster child was removed because the home was not of the required standard.

The total number of visits paid in connection with this section of the work was 83.

2. Institutions.

St. Teresa's Home.

On 31st December, 1946, there were twelve foster children in this Home. Sixteen were admitted during the year and twelve discharged. Twelve visits were made to the Home during the year.

Two deaths were recorded, one from prematurity (died shortly after admission) and one aged 1½ years from pneumonia and gastro-enteritis (died in Ladywell Hospital).

ADOPTIONS.

There have been 52 applications from prospective adopters and again a large proportion of these were for girls. There was one application for twins.

Forty-two children were placed with adopters for a trial period. Two applications were refused because of unsuitability of home conditions.

Two children were returned during the trial period at the mothers' request and one for medical reasons.

Thirty-eight adoptions were made legal.

DAY NURSERIES.

This year has seen some important changes in the Day Nursery Service in the City.

As a consequence of Circular 221/45 Ministry of Health and 75 Ministry of Education submitted to Local Authorities late in 1945, the following regrouping of nurseries in the City was decided :—

> Five of the Nurseries—Kara Street, Cook Street, Markendale Street, London Street and Hulme Street No. 1 unit were taken over by the Education Department to be used as Nursery Schools, and six Nurseries—Hulme Street No. 2, Wilmur Avenue, Fitzwarren Street, Eccles Old Road, Summerville Road and Howard Street were retained by this Department and continued to be used as Day Nurseries. All except Hulme Street, which takes children under two only, provided accommodation for children up to the age of five. The total number of places provided are :—

For children under two	125
For children aged two to five years	175

It was decided that the administrative control of these Day Nurseries should be the responsibility of this Department but that the Education Department should be responsible for the care of children aged two to five years. It was also agreed that the mothers' contributions should be raised from 1s. 0d. to 1s. 6d. per day.

The change in the grouping of nurseries took place on April 1st, but before this date the Hope Nursery had been closed because the premises were required by the Public Assistance Department. The Nursery at the Langworthy Estate was also closed and handed back to the Housing Department to be reconverted into dwellinghouses.

Day Nursery accommodation in the City was very much reduced by all these changes although the demand still remained as great as it was during the war years. At the end of the year there were over 300 children on the waiting lists, sufficient to fill six more nurseries.

The average daily occupation of the Nurseries during the year was 82·5 per cent.

The proportion of children over two years of age in the nurseries is higher than it should be. This is because the number of children reaching the age of five who could be discharged from the nurseries does not keep pace with the number of young children reaching the age of two.

It is increasingly difficult to find places in Nursery Schools for children from Hulme Street Nursery when they reach the age of two years.

In July it was decided to alter the hours of opening of the Nurseries from 7-0 a.m. to 7-0 p.m. to 8-0 a.m. to 6-0 p.m. At first the new hours of opening were not favourably received by the mothers or their employers, but most employers have adjusted the mothers' working hours to suit the hours of opening of the nurseries.

Medical Officer's Report.

In her report Dr. Eleanor Brown states that the general standard of health in the Nurseries has been less satisfactory than in previous years. The progress of infants admitted between the age of six months and twelve months has not been as satisfactory as the attention, care and good diet given in the nurseries should have produced. The children in this group have neither gained nor maintained weight satisfactorily. Progress is too often slow or spasmodic till after the age of twelve months.

The number of children suffering from tonsillar enlargement and adenoids remains high. Nasal catarrh still affects most of the children after admission. The condition has been ameliorated by Artificial Sunlight.

There has been an increase in the number of children admitted to the Nurseries this year suffering from mixed deformities. There are more cases of slight genu valgum than of genu varum, whilst varying degrees of flat foot are common. Footwear on the whole is of poor quality and design. Postural defects are more common than in the preceding two years. The Neumann Neurode exercises combined with the Artificial Sunlight should prove of benefit.

The dental condition of the children remains satisfactory.

Incidence of Infection.

From August to October there was an outbreak of Whooping Cough at Eccles Old Road Nursery, 37 children being affected.

In March nine cases of Chickenpox occurred at Howard Street Nursery, and in December an outbreak of Measles started at this Nursery—five cases being reported during this month.

Throughout the year there were 13 cases of dysentery—the causal organism being B. Dysenteriæ Flexner. The Nurseries affected were Hulme Street (four cases in April and six in November) and Howard Street (three cases during November).

Student Nursery Nurses.

During the year 11 students entered for examinations for the Nursery Nurses' Diploma of the National Society of Children's Nurseries. Five were successful in obtaining the Diploma, the other six were successful in the practical part of the examination.

MATERNAL DEATHS.

There were 15 deaths among Salford mothers during the year. Fourteen were institutional deaths and one occurred at home. Of the 14 institutional deaths six were emergencies and eight were "booked" cases.

Causes.

Seven of the deaths were directly due to the pregnancy or labour, the causes being as follows :—

1. Intra-partum rupture of uterus.
2. Heart failure due to air embolism following Cæsarean section.
3. Eclampsia, cerebral hæmorrhage.
4. Acute infective enteritis with peritonitis accelerated by hæmorrhage from uterus. Miscarriage.
5. Shock ; ante-partum hæmorrhage ; placenta prævia.
6. Accidental hæmorrhage.
7. Post-partum intra-uterine hæmorrhage ; obstetric shock.

A post-mortem examination was performed in each of these cases.

Eight of the deaths were due to conditions associated with the pregnancy. The causes were :—

1. Pulmonary tuberculosis.

*2. Ulcerative endocarditis, chronic bronchitis. Recent pregnancy.

*3. Cardiac failure. Severe anæmia.

4. Myocardial failure ; mitral stenosis. Complete abortion.

*5. Cerebral hæmorrhage.

6. Myocardial failure ; chronic bronchitis ; nephritis. Advanced pregnancy.

7. Myocardial failure ; mitral stenosis. Pregnancy. Specific disease.

*8. Cerebral hæmorrhage, 20 weeks pregnant.

A post-mortem examination was performed on the cases marked *.

There was only one death from sepsis and this was the result of an abortion which was suspected to have been self-induced.

Ante-Natal Care.

In all the " booked " cases, with the exception of one, the ante-natal care was adequate. In the exceptional case the mother did not " book " until six weeks before the expected date of confinement, and although advised to come into hospital for treatment refused to do so. Of the other cases three had had no ante-natal care.

Age of Mothers.

All were over the age of 25 years. The youngest was 29 and the eldest 45.

Parity.

All were multiparæ. Seven had had two previous pregnancies, one was para III, one para IV, three para V and two para VI.

Home Circumstances.

In all but four cases the home circumstances were said to be comfortable.

Only one of the pregnancies was illegitimate.

Only one of the women was employed in industry during pregnancy.

ALMONER'S REPORT.

Prior to July, 1946, there were, in the Public Health Service, two Almoners each with one assistant. One dealt solely with Tuberculosis work and one was attached to the Venereal Diseases Department but also undertook a considerable amount of work in connection with the Maternity and Child Welfare and School Medical Departments. From 1st July, 1946, the two sections were combined. Later in the year the Home Help Service, previously administered by the Supervisor of Midwives, was transferred to the Almoner's Department, and at the same time a Scheme for the provision of Domestic Helps was commenced in accordance with the provisions of the Ministry of Health Circular No. 110/46.

In every aspect of this work the Almoner and her staff endeavour to obtain a thorough understanding of each case. This involves frequent interviews in the office, visits to patients' homes and much patient listening and unobtrusive questioning. Many problems are brought to the Almoner which appear to have little connection with any of the Departments to which she is officially attached. Such inquiries, however, usually have some bearing on the health and well-being of families. Occasionally some domestic difficulty is lessened by the very fact that it has been discussed with an understanding person outside the domestic circle. It is seldom that anyone leaves the office without feeling that they have at least been understood and helped and advised as far as possible.

The fact that so many branches of the Health Service are housed in building helps to make the work more effective. Workers in every section are well known to each other and can be readily approached, thus matters of urgency can often be settled without delay.

The Almoner gratefully acknowledges the ready co-operation of colleagues in the Health Services and the assistance which she receives from Voluntary Societies and Hospitals, Probation Officers and Assistance Board and Ministry of Labour officials.

All these contacts are used to further the interests of patients.

Reports on the social work done in connection with Tuberculosis and Venereal Diseases will be found in the sections of the Report devoted to those Diseases.

Some details of the remainder of the work are given below :—

Of the patients referred by the Maternity and Child Welfare and School Medical Departments, many are for the arrangement of convalescent treatment. The fact that the Local Education Authority now accepts financial responsibility for the maintenance of school children and that the Health Committee are frequently able to assist in other cases, makes the actual arrangement of convalescence a fairly straightforward matter. It is, however, usual to find upon investigation that other forms of assistance or advice are required before a child or family can go away. Shortages of nightwear, underclothing and footwear are now quite usual in most families and where the standard of the family is lower the shortages are more acute. The following case illustrates this :—

Three children, all girls, in one family were recommended by the School Medical Officer for convalescent treatment. The children were all reasonably well-clothed and the mother was a sensible hard-working woman who kept their clothes clean and in good repair. They possessed between them three pairs of pyjamas and one nightgown. The nightgown was worn by each girl in turn whilst the pyjamas she had recently worn were washed.

Fortunately the stock of clothing given to the Department in 1945 by the W.V.S. is not yet completely exhausted and in the above case, as in many others, suitable nightwear was provided.

All manner of difficulties present themselves when the mother of a family is recommended for convalescent treatment and the Almoner must of course be undaunted in her determination to see that the mother takes the treatment offered and to help the mother to dispose of difficulties as they arise.

The case given below gives some indication of this :—

Mrs. ——, the mother of a "problem family," had been recommended for a holiday at the Brentwood Recuperation Centre, Marple. The recommendation included the mother and one child aged two years. Arrangements were made for the care of several other children during their mother's absence and suitable clothing was produced for the mother and two-year-old child. All the arrangements were completed for their reception at Brentwood subject to a satisfactory medical examination on the day prior to their departure. At this examination the child was found to have developed impetigo. Intensive treatment was arranged immediately but admission to Brentwood had to be delayed. Whilst the child was undergoing treatment an older boy became ready for discharge from Hope Hospital and it was felt that the mother could not go away and leave him without attention. Further negotiations were, therefore, started and finally with the help of the Pacifist Service Unit worker the older child was collected from Hope Hospital, the mother and younger child from their home and the family escorted to Marple and handed over to the Warden of the Recuperation Centre. It was some recompense for the Almoner to hear later from the Pacifist Service Unit worker who has charge of this family, that the mother, a rather ineffective, pathetic little woman, had faced the winter and all its difficulties with more courage and resource than she had ever shown before.

Every opportunity is taken during interviews with patients to offer constructive suggestions which might help them to have healthier and happier families. It is sad to find that so many mothers have very little knowledge of the art of housekeeping and home-making. Cooking, cleaning and sewing are subjects which are often in the Almoner's conversation, and she has on many occasions acted as fitter when clothing has required alteration to make it fit the recipient.

The Home Help Scheme has continued on the same lines as in previous years, but due to the increased number of domiciliary confinements more use has been made of the service than formerly. Financial responsibility for this scheme still rests with the Corporation. The Domestic Help Scheme which commenced on 1st September, 1946, is carried on with the same administrative machinery but the cost is borne by the Government. Separate records are kept in order that the appropriate Authority may be charged. In both cases the Helps are paid at the rate of 1s. 6d. per hour and the full charge for their services is 1s. 9d. per hour. This charge is reduced according to the family income which is verified in all cases.

Home Helps are supplied in Maternity Cases and Domestic Helps in houses where there is need for temporary assistance to overcome a period of sickness or domestic difficulty.

Investigation into the circumstances of applicants for Domestic Help has revealed how great was the need for this Service. Brief details of some of the cases assisted are given below :—

> Mrs. B. is over 70 years of age, her daughter-in-law died two days after confinement leaving the grandmother with the care of her son's child. Mrs. B. was unable to cope with her housekeeping (for four persons) and the care of the infant. A Domestic Help was supplied for three half-days per week to do the rough work.
>
> Mrs. N. is blind. Her husband was in need of hospital treatment but refused to leave his wife without help in the home. A Domestic Help was supplied and attended daily for four weeks until the husband returned home.
>
> Other cases include an old-age pensioner (woman) living alone and almost bedfast ;
>
> A housewife returned from hospital following a major operation ;
>
> A mother with a four-weeks-old baby who had not recovered her strength after confinement ;
>
> An old-age pensioner, bedfast, living with daughter who had injured her foot and could not get about.

During 1946 Home Helps were supplied in 136 Maternity Cases.

From 1st September to 31st December, 1946, 16 Domestic Helps were supplied.

Twenty-five inquiries regarding the Domestic Help Scheme were found on investigation to be outside the scope of the Service.

IMMUNISATION DEPARTMENT.

The work of the past year in the Immunisation Department has been most successful. The percentage of immunised children, 0-15 years, has risen from 64·2 per cent. to 81·3 per cent. The total number of children immunised during the year was 5,856. This is an increase of 2,297 over the number immunised during the previous year.

To obtain these results new schemes were put into operation. Thousands of propaganda leaflets were distributed in clinics and schools throughout the city. Cinema slides were exhibited in all the larger cinemas. Diphtheria Immunisation was carried out at every Child Welfare session in addition to the special immunisation sessions. Only a very small increase in the number of immunised children resulted from these schemes so during the last 10 weeks of the year an intensive campaign was organised.

Health Visitors were supplied with equipment for immunising children on their districts. This work took precedence over all but the most urgent district work enabling Health Visitors to follow up their advice by offering immunisation there and then in the home.

The results were significant.

Six hundred and nine immunisations were completed in November and 1,008 in December, bringing the total number of immunisations of children under five years completed during 1946 to 4,145. The percentage of children under five years who were immunised increased from 55·77 per cent. to 67·6 per cent. during the year.

Immunisation in the home by the Health Visitor was found to be most successful. Many mothers who refused to take their children to the clinic or allow the Clinic Nurses to immunise in the home were willing for immunisation to be carried out by the Health Visitor who is usually well known to them. In these ten weeks the number of completed immunisations equalled the number which under other schemes had taken eight months to achieve.

A survey was taken of the immunisation of school children from 4-15 years as it was believed that many children, for whom there was no record of immunisation, had been immunised whilst in evacuation areas. Forms, for completion by parents, were distributed by Head Teachers to the children in their schools and later returned to the Immunisation Office where a check was made with the record cards. From this survey it was found that 2,664 children had been immunised, mostly in other areas, for whom we had no record. Consent for immunisation was given for 961 children whose immunisation has since been completed. Four hundred and ninety parents refused Diphtheria Immunisation for their children.

89·7 per cent. of school children aged 5-15 years have now been immunised. This is an increase of 16·3 per cent. on the previous year.

It is interesting to note that of the 5,856 children immunised during the past year, 90 children were immunised by General Practitioners, 13 in hospitals, 105 in the Day Nurseries, 2,263 in Child Welfare Clinics, 1,674 in their own homes and 1,711 in schools or school clinics.

I has been found advisable for all children who were immunised in infancy to be given a " reinforcing " injection when school life begins. One hundred and sixty-eight " reinforcing " injections were given during the year.

In addition to Diphtheria Immunisation, 870 children under five years were immunised against Whooping Cough.

The following chart shows clearly the results obtained from the past year's work.

	0-5 *Years.*	5-15 *Years.*	0-15 *Years.*
Number immunised during 1945	2,953	581	3,534
Number immunised during 1946	4,145	1,711	5,856
Increase..	1,192	1,130	2,322
Per cent. immunised at 31st December, 1945..	55·7%	73·4%	64·2%
Per cent. immunised at 31st December, 1946..	67·6%	89·7%	81·3%
Per cent. increase	11·9%	16·3%	17·1%

HOPE HOSPITAL.

Report of the Medical Superintendent for the year 1946.

General.

The advent of peace and the establishment of post-war conditions have served to confirm the accuracy of the views of those prophets who anticipated increasing and even staggering difficulties at the close of the war. Yet these troubles, as they affected this hospital, would have been much less painfully felt, had they not been coupled with an aggravation of the problem of accommodation brought on by the necessity to evacuate a substantial portion of the Old Peoples' Homes, together with an intensification of the shortage of nursing staff of all grades. This latter difficulty was common to all hospitals in the country to varying degrees, but though hard hit, and often sorely embarrassed, this hospital was yet able to keep all its units and departments functioning throughout the year.

It was obvious that urgent attention had to be given to making good the accommodation lost as a result of enemy action, the loss of which in 1940 had been masked by the facilities afforded by the space available in the Old Peoples' Homes. Throughout the year, as Park Hospital, Davyhulme, was gradually reopened, the work of the Lancashire County Council area was largely withdrawn, but it never completely ceased. This gradual withdrawal did affect the volume of work, but only to a very moderate extent and the figures of work done, as shown in the various tables reach a very high level though in some cases they fall a little short of the peak figures attained in the previous year. Nevertheless the maternity department had the busiest year ever recorded in the history of the hospital in spite of the fact that the utmost difficulty was experienced in maintaining the nursing staff at a level sufficiently high to keep all the wards open.

Schemes were drawn up and plans made during the year in order to relieve the congestion in various units and facilitate the ultimate evacuation of the Old Peoples' Homes. These included plans for an extension of the X-ray department, a new ante-natal clinic, additional accommodation for nursing staff in adapted houses, addition to the temporary stores provided in 1945, extension to the kitchen, a temporary out-patient department and receiving ward, and temporary administration offices. Yet of these, all urgently necessary, few showed any prospect of materialising in the reasonably near future. The development of these schemes represented an expenditure of much time, energy and enthusiasm, not only on the part of members of the hospital staff, but also of the staff of the City Engineer who prepared the plans, and their constant deferment and the lack of any real hopes of their fulfilment proved a most discouraging feature, and evoked a sense of frustration and keen disappointment. It was made perfectly and painfully clear that there is little prospect of any real development in the direction of the alleviation of our accommodation difficulties in the near future by the provision of fresh buildings, either temporary or permanent.

The other serious problem, shortage of nursing staff, was dealt with rather more effectively, by the use of ward orderlies, without providing a completely satisfactory solution. This represented a new departure in ward organisation and management, but the presence of the ward orderlies, used to relieve and help the nurses in the wards undoubtedly saved the day and allowed us to keep all the wards open throughout the year. This was assisted by a substantial easement in the domestic staff situation, as, throughout the year, daily helpers arrived in numbers sufficient to raise the domestic establishment to a more satisfactory level. It is clear that the numbers of new student nurses coming forward will not be sufficient to maintain the nursing staff at its establishment level, a level which at present is not yet sufficiently high to permit a 96-hour fortnight for the student nurses. It will be necessary to face a future where there will be a chronic deficiency of student nurses, and the gap will have to be closed by the wider use of ward orderlies and part-time nurses. A very pleasing aspect of this change has been the addition to our nursing staff of a number of male orderlies, who have proved their effectiveness and usefulness in the wards. These men are generally discharged members of the Forces who have had some experience of this type of work whilst on national service.

Necessity has compelled the acceptance of these changes and it is a pleasure to record that they have been made to work to the benefit of the hospital and its patients, thus relieving, in some measure, the severity of this difficulty. But the problem of shortage of accommodation cannot be transmuted in this fashion, and until it is faced and dealt with, the hospital will be continuously hampered and hindered in its ability to do its job. The limitation and restriction of admissions as well as the hurried and early discharge of patients, constantly vitiate the good work done by the staff of the hospital, and provide a never-ending source of friction and dissatisfaction.

Emergency Medical Service.

The work in connection with the Emergency Medical Service was steadily reduced throughout the year. In December the bed reserve which had been maintained at 50 throughout the year, was reduced to 20. The last convoy was admitted in March when 19 soldiers arrived. Thereafter admissions in connection with the Emergency Medical Service consisted of the casual transfer of isolated patients whose homes were in the neighbourhood of this hospital. Two hundred and twenty-two patients were admitted to the E.M.S. beds, compared with 304 in the previous year.

Emergency Medical Service admissions :—

Service patients	152
Civilians (Merchant Navy, etc.)	70
	222

Medical Staff.

The resident medical staff was augmented in August by the appointment of Dr. Hayes as assistant resident surgical officer, and by Dr. Ridehalgh as assistant resident obstetrical officer. Although the junior medical officers were not increased in number, they were relieved and assisted by the advent of a number of demobilised medical officers who were attached to the hospital under the Government Training Scheme as supernumerary trainees in various branches of medicine. Thirteen of these doctors were attached as junior house officers, and four as senior medical officers. In addition, two demonstrations were given by senior members of the medical staff to demobilised medical officers in connection with the organised refresher courses of the Manchester Medical School. In spite of the additional visiting anæsthetists, who had joined the medical staff the previous year, the junior medical officers still had to administer 2,279 anæsthetics. Ten people acted as *locum* medical officers on 12 occasions for a total of 169 days and one senior medical student was employed for 23 days. Five assistant medical officers ceased duty during the year and five commenced :—

Ceased duty—

Dr. Harrison	31st March, 1946.
Dr. Boydell	13th April, 1946.
Dr. Hedley	13th April, 1946.
Dr. Ferguson	30th September, 1946.
Dr. Elliott	13th October, 1946.

Commenced duty—

Dr. Wyile	1st May, 1946.
Dr. Kearney	1st May, 1946.
Dr. Finlay	6th May, 1946.
Dr. Hindley	1st October, 1946.
Dr. Morford	14th October, 1946.

Dr. Roworth returned to duty as obstetrician and gynæcologist on 2nd January, 1946, after over six years' service in the Navy, and Dr. Resnick who had occupied the post in a temporary capacity since August, 1942, ceased duty on 19th February.

The visiting medical staff was increased on 13th April when Dr. Parkinson commenced as visiting physician. Miss Mills ceased duty as visiting surgeon when Mr. Heslop resumed on 11th February after service with the Forces. Dr. Faulkner resigned as visiting ophthalmologist in October and was followed by Dr. Janus. In May, Dr. Chisholm began an additional regular weekly pediatric visit, and Dr. Ghosh an additional weekly X-ray session.

The Staff Medical Society continued to meet regularly throughout the year, and the annual clinical meeting was held in October and was attended by 63 medical practitioners. A Medical Staff Committee was inaugurated in February and met at regular intervals during the year under the chairmanship of Dr. Crawford, with Dr. Mackay as secretary.

In February, the work of the hospital was recognised by the Conjoint Board of the Royal College of Surgeons, England, and the Royal College of Physicians, London, as qualifying for the Diploma in Laryngology and Otology. In October, the work of the assistant resident obstetrical officer's post was recognised by the Royal College of Obstetricians and Gynæcologists as qualifying for the examination for the membership of that College.

Dr. Ridehalgh passed the examination for the Diploma of the R.C.O.G. in October, 1946. The following papers were published in the medical press :—

1. " Intrauterine Fœtal Death due to Rhesus Incompatibility "—by Dr. Resnick. *Journal of Obstetrics and Gynaecology,* British Empire, February, 1946.
2. " Unilateral Dysmenorrhœa associated with Uterine Malformation "—by Dr. Resnick. *South African Medical Journal,* July, 1946.

Nurses' Sick Bay.

Attendances at the daily staff clinic have been maintained at a high level, though fewer than in the previous year. The total attendances amounted to 1,870, of which 1,513 were members of the nursing staff and 357 other staff. The main groups of conditions for which advice was sought were :—

	Attendances.
Septic conditions	259
Colds	284
Tonsillitis	123
Ear, Nose and Throat	120
Injuries	205
Varicose veins	39
Skins	81
Teeth	20
Debility	166
Anæmia	19
Rheumatism	18
Gastro-enteritis	105
Menstrual disorders	15
Eyes	44
Flat feet	21
Medical examinations	133
Mantoux tests	66
Miscellaneous	152
	1,870

Early in January, Ward H.3 became fully available for use as a sick bay, with 19 beds. This accommodation proved a splendid asset in the treatment of sick nurses and the number of beds very adequate for this purpose. Yet on one occasion, early in the year, the number of sick nurses overflowed from Ward H.3 into the general wards. The service provided for the sick staff on Ward H.3 has been much appreciated, although it is hoped eventually to improve the accommodation further by providing additional cubicles when labour and finance permit. The burden of sickness on the nursing staff was even more onerous than in previous years, 3,756 days being lost compared with 3,545 in 1945. Once again pulmonary tuberculosis was a very heavy factor, and the increased figure is due to the carry-over of three such cases from 1945, who were off duty continuously throughout the year. A regular system of routine X-ray examinations is in force for all members of the nursing staff, and this enables cases of pulmonary tuberculosis to be discovered at the earliest possible moment. This problem is receiving anxious and continuous consideration, and its existence, in spite of the closest supervision, makes even more urgent the improvements which have been requested in the nurses' home accommodation.

Infection.

Although the total number of cases of infection showed an increase, this was accounted for by a sharp rise in the number of cases of chickenpox of which there were 48, compared with five. Most of these cases occurred in Ward H.2, which also had the largest number of other infections. In addition, 75 cases of epidemic diarrhœa occurred in the hospital, scattered throughout the year : 36 of these arose in the maternity department. The cases of epidemic diarrhœa did not approach the large numbers of the previous year but they did form a definite and appreciable entity in the infection picture.

Thirty-six patients suffering from infectious disease, were transferred to Ladywell Hospital, the remainder being retained in the hospital for various reasons. Lack of adequate side ward accommodation prevented effective isolation of these cases and added to our difficulties and responsibilities. It is to be regretted that a number of the few side wards available are being used for office and other purposes when they are sorely needed for our patients. The crying need in hospital accommodation to-day is for more side wards in order that large ward groups may be broken up into small units, and it is ironical that the reduced and limited space available should be diverted to purposes other than housing patients. The side ward to-day is not just a luxury, to be reserved for the privileged few who can afford to pay for it, but is, in many cases, a necessity for the decent and effective treatment of a number of conditions, as well as infectious diseases.

TABLE OF INFECTIONS.

	Total Cases.	Ward G3	Ward H2	Ward SA5a. (F3)	Ward SA5b. (B3)	Other Wards.	Staff.
Diphtheria	17	–	8	6	1	1	1
Whooping Cough	11	–	8	3	–	–	–
Scarlet Fever	1	–	–	1	–	–	–
Measles	2	1	–	–	–	–	1
German Measles	–	–	–	–	–	–	–
Chickenpox	48	–	43	–	–	3	2
Mumps	–	–	–	–	–	–	–
Enteric Fever	1	1	–	–	–	–	–
Dysentery (total)	35	4	8	7	1	10	5
(Sonne)	(33)	(3)	(8)	(7)	(1)	(9)	(5)
(Flexner)	(2)	(1)	–	–	–	(1)	–
(Newcastle)	–	–	–	–	–	–	–
TOTALS	115	6	67	17	2	14	9
Epidemic diarrhœa	75	–	3	2	2	54	14

NEW ACTIVITIES.

Almoner.

Miss Van Gelder commenced duty on 22nd July and thus initiated the almoner's department of the hospital. Her full report on another page gives some conception of the vast field for work in this connection and how the patients can be helped by the almoner. The assistance is not directed solely to the patient, but the doctor is also helped in his treatment of the case. It need hardly be stated that in a hospital of this size, one almoner can only cover a selected and limited portion of the area requiring her services, but the ground has now been broken, and the expansion of the department will inevitably follow—as the benefits and blessings of this branch of social medical work become more universally recognised and appreciated.

Chiropody Clinic.

A chiropody clinic was instituted on 22nd June under the direction of Mr. F. Charlesworth, and was held once weekly. One hundred and twelve patients were attended to in this clinic, which, in the first instance, was limited largely to members of the staff. In addition, special foot problems occurring in hospital patients were referred to this clinic, and a service was provided which was much appreciated. In particular, it proved a great boon to members of the nursing staff, who are so much on their feet and are thus prone to foot troubles. It is hoped to expand the facilities and make them more freely available to patients generally.

Food Supervisor.

Miss Clucas commenced duty on 13th May as food supervisor and thus a great step forward was made in the reorganisation of the hospital food arrangements. Her first problems were related to the kitchen, but many other schemes were under consideration. The inevitably difficult and thorny problem of kitchen staff, though eased, was by no means settled. Plans were drawn up for the reorganisation of the main hospital kitchen, including the provision of additional equipment in the kitchen and wards and for a more efficient system of food conveyance. But even without these very necessary additions, it was possible to effect changes and make substantial and much appreciated improvements in the hospital dietary. Much yet remains to be done, but it is felt that progress is being made on the right lines, and will be very real indeed, if effective support is forthcoming. A canteen was developed to meet the needs of the growing members of non-resident staff, but here again lack of suitable accommodation proved a stumbling block in the development of this much-needed service.

Other Departments.

The Flying Squad was called out on 15 occasions in connection with obstetrical complications occurring in patients delivered in their own homes. The appointment of an additional obstetrical officer, envisaged in last year's report, was made in August and thereafter it was possible to make this service more freely available and thus more efficient and valuable. The average time spent on each call was two hours—six cases occurring during the day and nine during the night. It is likely that the Flying Squad will be requested more frequently in the future and it is hoped, by providing an experienced obstetrical officer, to make much more effective the aid which it can give in an emergency.

The occupational therapy department, after a useful spell of work, suffered a severe blow when Miss Waldie left at the end of August, and it was not possible to provide a successor immediately. For nearly two months the activities were suspended until Miss Roberts commenced duty as occupational helper on 11th November. Here again, inadequate staffing imposes limitations on an activity which is a most valuable contribution to the work of the hospital. It was hoped to appoint an occupational therapist, as well as an occupational helper, the latter appointment to help with the work in the children's wards, formerly undertaken by the teaching staff. Even a staff of two in the occupational therapy department of a hospital of this size, can only touch the fringe of the needs, yet, as in so many other things, it is felt that a useful and significant beginning has been made.

The following articles were made :—

Felt toys	1,816
Leather articles	659
Embroidery	489
Rugs	84
Scarves	36
String work, etc.	27
	3,111

The premature baby ward on B.2.X admitted 30 babies of whom eight died. This work is limited by the accommodation available but it provides a useful unit to which premature babies born outside the hospital can be admitted, along with their mothers. The bulk of the premature baby work has continued to be undertaken in the maternity department, along with the other obstetrical work. It could be more effectively done in suitable and specially equipped units but such accommodaton is a long way off. The nursing of premature infants is a highly specialised job, demanding the utmost skill and concentration from the nursing staff and requiring modern equipment and well-organised and ample accommodation. Such a service is costly to run, but the results are worth while and satisfying in their toll of lives saved.

Hope Hospital School.—Mrs. Spence resigned in January as Headmistress and was succeeded by Miss Ashworth, B.A., who commenced duty in June. During the year, 340 children have been placed on the school roll, but nearly twice that number have received instruction. This position is due to the suggestion of H.M. Inspectors who visited the school in February. They advised that children should not be placed on the school roll unless they have been certified as likely to remain in hospital for at least three weeks. A child, whose stay in hospital is less than three weeks, is not placed on the roll. This accounts for the reduction in the number of children placed on the roll, although wherever possible, instruction was given to those children in hospital for a shorter period. It is a great pity that staffing conditions do not allow more attention to be given to those short-term cases, as the services of an experienced teacher help these children to settle down quickly. Most of the long-term cases in school are children suffering from rheumatism, or chorea, but there are also a number of orthopædic cases. The teachers have aimed at allowing these children to follow as nearly as possible a normal school curriculum, and in most cases, progress has been very satisfactory.

The Hospital Library Service was directed by the Rev. Price, following the resignation of Mrs. Spence. The number of books issued during the year was 7,515. During the latter part of the year the number of voluntary helpers was much reduced, and as a result it was not possible to maintain the ward rounds regularly. This meant a decrease in the number of books issued, which is all the more regrettable as there was no indication of a diminution in the desire for reading matter amongst the patients. This service is entirely voluntary and it is hoped to augment the numbers of helpers, on whom the success of this most valuable activity rests. A small but compact room was provided for the library in the premises formerly used as the receiving department. Supplies of books were generally adequate, but the books have to be distributed, and unless helpers are forthcoming, the service will continue to be disappointing.

The rehabilitation service has had a full and satisfying year of work. Once again out-patient attendances have been rather disappointing but the number of wards visited has been increased. It was felt, and experience has confirmed this view, that the most useful contribution made in rehabilitation in this hospital with the existing staff is in the organisation of group exercises in the wards. The gymnasium in the Old Peoples' Homes was dismantled and re-erected in the premises formerly used as a decontamination unit. But so many demands are being made on this room for other purposes, such as committee meetings, church services, general meetings, and paying-out room, that it is impossible to reserve it for the purpose of a gymnasium.

There is an unfortunate tendency to paint a rather sombre picture in a report covering a period of intense difficulties, characterised by the invention of plans and schemes, most of which seem doomed for the pigeon-hole, but this picture has not been overstressed. During the war, it was proper that the work should continue under conditions of improvisation and adaptation, and this was freely recognised. But the time has now come when the hospital should get its fair share of what is going for reconstruction, in the shape of labour, money and materials, and genuine efforts should now be made to heal, at least temporarily, the gaping war wounds which the hospital suffered. The further postponement and deferment of these plans will cause a disastrous setback in the standing of the hospital, which will find itself lagging in comparison with its fellows, more advantageously placed. If the hospital is to maintain its position and standing, and its reputation for progress, it must have adequate assistance, and, as a first instalment, it does not seem to be asking too much that war damage should now be made good. It is clear that there will be, in the future, a continuing and even increasing demand for the services which the hospital provides for the community. The defection of the Lancashire County Council work has made little impression on the total volume of work done, though it did have more serious effects on the income of the hospital. The aged sick require the hospital more and more, and it is one of the greatest disappointments in our work to see how the hospital fails to meet the requirements of the situation in this respect. That this failure is due in no way to deficiencies in the efforts of members of the hospital staff nor in the use made of the hospital's resources, does not materially ease the position : the bitter and crucial fact remains that a needy section of the community is being largely denied the services of the hospital, from time to time. It is easier to state the problems and even to suggest remedies, than it is to effect a cure, but when we get down to hard facts, we find the chief obstacles in that cold, harsh word, finance. And there it is my duty to leave the question for others to take up.

The detailed reports of the departments and the various tables of figures give a picture of the work of the hospital and serve to show what is being accomplished. But figures do not reveal the quality of the service provided, not can they do justice to the devoted and loyal contribution which all members of the staff must make in order to produce that essential quality of particular and personal consideration for all patients, for which we must constantly strive. And if we do not always attain that desired perfection, we should not despair, but must redouble our efforts. The measure of our success in the past should be an encouragement to our ambitions and hopes for the future. I should like to place on record once again our appreciation of the constant support and co-operation which has been given throughout the year by the Medical Officer of Health and the Health Department, which has enabled us to achieve much of what has been accomplished, and helped us to pull our full weight in our common struggle against the enemy of ill health.

Medical Department.

Staff—Dr. W. Mackay, Physician.
Dr. J. S. Parkinson, Visiting Physician (from 1st April).
Assistant Medical Officers allocated to the medical wards.
Miss N. C. Rogers, Visiting Electrocardiographer.

Dr. Mackay reports as follows :—

General Work.—The number of patients requiring investigation and treatment continued to be high, and the wards were unusually full ; indeed, during busy periods, accommodation had to be found for patients in other wards. Eighty-four cases of acute primary pneumonia were admitted during the year, and three cases of meningococcal meningitis were treated in the hospital. Sulphamezathine continued to be used with satisfaction in the treatment of lobar pneumonia and meningococcal meningitis. Penicillin was used occasionally in the treatment of pneumonia not responding to sulphamezathine. It was also used, and with encouraging success, in the treatment of a few patients suffering from bacterial endocarditis. Six cases of tuberculous meningitis were admitted to hospital during the year, and five cases of malaria were diagnosed and treated.

The electrocardiograph as an aid to diagnosis in the investigation of cardiac muscle function continued to be of great help. Reports on 666 electrocardiographic tracings were made during the year.

Pulmonary Tuberculosis.—The total number of new cases diagnosed during the year was 36. Another 35 known cases of pulmonary tuberculosis were admitted to hospital ; all these patients were brought to the notice of the Senior Tuberculosis Officer at his weekly visits, and arrangements made to enable him to take them directly under this care. Certain pulmonary cases attending the Municipal Chest Clinic were admitted to hospital as occasion arose for special forms of investigation and treatment.

General Medical Clinic.—The work in this clinic continued to increase. New patients numbering 1,026 were sent by their private medical attendants for help in diagnosis, for investigation, or for specialised treatment. There were 1,447 return attendances by old patients.

The Diabetic Clinic was attended by an average of 91 patients per month. The total number of attendances during the year was 1,171. New cases numbered 32. Protamin zinc insulin alone or combined with soluble insulin, continued to be used in the treatment of all new cases of diabetes mellitus.

Special Investigation Clinic.—This clinic was attended by 88 children, 80 of whom attended for the first time. Each child presented some medical problem. All were examined and investigated and reports, with recommendations, sent to the School Medical Officer or the Maternity and Child Welfare Officer concerned.

Medical Out-patients :—

	1944.	1945.	1946.
New patients	975	970	1,026
Old patients	1,315	1,254	1,447
Diabetic clinic	975	1,056	1,171
Special investigation clinic ...	118	77	88
	3,383	3,357	3,732*

* Including 1,138 new cases.

Infectious diseases notified :—

	1944.	1945.	1946.
Typhoid	—	1	1
Diphtheria	14	1	10
Scarlet Fever	1	3	1
Erysipelas	—	2	1
Pulmonary tuberculosis	26	18	36
Tuberculous meningitis	6	6	6
Tuberculosis (other forms) ...	27	11	35
Meningococcal meningitis	4	5	3
Pneumonia	85	61	84
Acute poliomyelitis	1	1	—
Malaria	3	1	5
Pemphigus	—	—	—
Dysentery	31	26	23
Measles	12	13	2
Whooping cough	7	1	—
Ophthalmia neonatorum	—	3	4
	237	153	211
Electrocardiograms	542	571	666

Surgical Department.

General—Mr. Brown, Surgeon.
Mr. Grimshaw, Surgeon.
Miss Mills, Visiting Surgeon (to February).
Mr. T. Heslop, Visiting Surgeon (since February).
Orthopædic—Mr. Milner, Visiting Surgeon.
Ear, Nose and Throat—Mr. McKelvie, Visiting Surgeon.
Assistant Resident Surgical Officer—Dr. Hayes.
Assistant Medical Officers allocated to the surgical wards.

Mr. Grimshaw reports as follows :—

Though 1946 brought no outstanding changes in the field of surgery, circumstances generally have improved and made more satisfactory treatment possible. The extended use of penicillin has been invaluable both in the treatment of specific infections and in the prophylactic administration before and after operation. With a clientele of whom a large proportion suffer from a troublesome chronic bronchitis, and who have passed the best years of their life, penicillin saves much post-operative morbidity and has extended the safety of operative interference. If penicillin is expensive, its use saves in reducing the patient's time in hospital both before and after operation.

Of new operations, Millin's retropubic approach to the prostate has been practised with success, and the hormonal control of cancer of the prostate continues to maintain many patients in active good health.

The greatest drawback to improved surgical care is still the shortage of nursing staff. Nursing orderlies have done much to fill the defect and are an undoubted success in practice, many bringing the high standards of the R.A.M.C. with them and all showing real interest in their work. The addition of Dr. G. Hayes to the staff as an assistant resident surgical officer has allowed further time to be spent with the patients to their undoubted advantage. The help of the Almoner has been obvious in removing many of the patients' worries and thereby aiding their recovery.

Arrangements for the sharing of the casualty work of the district with other hospitals were made at the end of the year and the appointment of a part-time Fracture Officer working under the Visiting Orthopædic Surgeon was proposed.

In all, 1946 was a year of definite progress in the organisation of our service.

The operations were as follows :—

(Full-time staff)—	
Medical Superintendent—Mr. Brown	397
Full-time Surgeon—Mr. Grimshaw	685
Obstetrician and Gynæcologist—Dr. Resnick	19
Obstetrician and Gynæcologist—Dr. Roworth	248
Assistant R.O.O.—Dr. Donovan	395
Assistant Medical Officers	1018
	2,762
(Visiting staff)—	
Mr. Heslop, General Surgeon	105
Miss Mills, General Surgeon	10
Mr. Milner, Orthopædic Surgeon	66
Dr. Rickards, Gynæcologist	127
Mr. McKelvie, Aural Surgeon	685
Dr. Faulkner, Eye Surgeon	54
Mr. Pollitt, Dental Surgeon	83
Other Visiting Surgeons	18
	1,148

The anæsthetics were as follows :—

	1944.	1945.	1946.
General (chloroform, ether, gas and oxygen)	1,603	1,464	1,208
Spinal	1.090	1,098	1,125
Intravenous anæsthesia	624	746	930
Local	312	578	410
Other (twilight, avertin)	51	60	237
	3,680	3,946	3,910

The anæsthetics were distributed as follows :—

Dr. Ghosh	163
Dr. Nash	302
Dr. Kupfermann	58
Dr. Sneddon	236
Surgeons	793
Assistant Medical Officers	2,358
	3,910

Orthopaedic Department :—

	1944.	1945.	1946.
In-patients :			
New admissions	532	384	286
Discharges	461	370	256
Deaths	9	15	5
Out-patients :			
Attendances	1,373	1,622	1,545
Patients treated in plaster room	2,029	2,114	1,978
Anæsthetics administered in plaster room	159	136	125

Ear, Nose and Throat Department :—

	1944.	1945.	1946.
Ward patients	52	50	898
New patients	708	602	
Old patients	1,198	1,124	248
	1,958	1,776	1,146
Operations performed	800	826	685

Total number of operations performed **3,910**

Head and Neck.	1. Lips, face, mouth and jaws	18
	2. Tongue and salivary glands	4
	3. Skull and scalp	13
	4. Intracranial operations	1
	5. Tuberculous glands, neck	0
	6. Neck—other conditions	52
	7. Thyroid	18
Ear, Nose and Throat.	8. Tonsils and adenoids (guillotine)	533
	9. Tonsil dissection	22
	10. Diathermy of tonsils	8
	11. Nose and paranasal sinuses	79
	12. Mastoid	16
	13. External ear, paracentesis, etc.	8
	14. Fauces, pharynx and larynx	1
	15. Bronchoscopy and œsophagoscopy	8
Eyes.	16. Eyes	57
Teeth.	17. Teeth	89
Stomach and Duodenum.	18. Partial gastrectomy	37
	19. Gastroenterostomy	13
	20. Toilet and suture perforations	15
	21. Ligation and other operations	8
	22. Gastroscopy	15
Small Intestine.	23. Small intestine (other than duct herniæ)	18
Colon, Rectum and Anus.	24. Colostomy and cæcostomy	24
	25. Resection and ileo-transverse colostomy (anastomosis)	20
	26. Abdomino-perineal and perineal resection of rectum	1
	27. Prolapse, hæmorrhoids, fissure, sigmoidoscopy	152
	28. Abscesses, ischio-rectal and perianal, fistulæ	24
	29. Other operations (closure of colostomy, etc.)	28
	30. Sacrococcygeal cyst	4
Appendix.	31. Acute appendices	121
	32. Interval appendices	116
Laparotomy.	33. Laparotomy—exploratory only	68
Gall Bladder.	34. Cholecystectomy, cholecystostomy and cholodochostomy	38
	35. Cholocystgastroenterostomy	3
Pancreas.	36. Pancreas	1
Spleen.	37. Spleen	—
	38. Liver	—
Peritoneum and Mesentery.	39. Peritoneum and mesentery (cysts, subphrenic abscess, peritonitis, appendix abscess, etc.)	20

Herniae.	40.	Inguinal herniæ	167
	41.	Femoral herniæ	55
	42.	Umbilical herniæ	28
	43.	Ventral and incisional herniæ	17
	44.	Other herniæ	4
Blood Vessels.	45.	Embolectomy	—
	46.	Varicose veins	37
Kidney and Ureters.	47.	Nephrectomy	15
	48.	Nephro- and uretero-lithotomy	5
	49.	Nephro- and uretero-stomy	2
	50.	Perinephric abscess	6
	51.	Other operations on kidney and ureter	9
Bladder.	52.	Suprapubic cystotomy	26
	53.	Cystoscopy (including diathermy)	91
	54.	Other S.P. operations (lithotomy, etc.)	2
Prostate.	55.	Suprapubic prostatectomy, etc.	20
	56.	Other prostate operations	—
Urine, Penis and Scrotum.	57.	Bougies	53
	58.	Circumcision	124
	59.	Other operations on urethra, penis and scrotum...	3
Testes.	60.	Orchidopexy	1
	61.	Hydrocele and varicocele	11
	62.	Orchidectomy, epididymectomy	6
Gynaecology.	63.	Vulval neoplasms	1
	64.	Plastic repairs and operations (perineum, vagina, etc.)	78
	65.	Hysterectomy	68
	66.	Hysterotomy	4
	67.	Myomectomy	3
	68.	Cæsarean section	82
	69.	Dilatation and curettage	634
	70.	Ventrifixation, etc.	4
	71.	Salpingectomy and ectopics	9
	72.	Ovariotomy and oophorectomy, alone	26
	73.	Tubo-ovarian abscess	3
	74.	Minor gynæcological operations	101
Orthopaedic.	75.	Spinal cord	5
	76.	Vertebral column	3
	77.	Amputation, arms	1
	78.	Amputation, legs	10
	79.	Amputation, digits	9
	80.	Fractures and dislocations, manipulations and open reductions	8
	81.	Plastic bone operations, knock-knee, hammer toe, etc.	16

Orthopaedic (continued)	82. Acute and chronic osteomyelitis, sequestrectomy..	7
	83. Lumbar and other sympathectomies	—
	84. Joints—cartilages	14
	85. Tendons and nerves	11
	86. Torticollis	2
	87. Smith Peterson pins	10
	88. Gun shot wounds and foreign bodies	14
	89. Manipulation and plaster	5
	90. Wounds and burns	14
Skin.	91. Abscesses	99
	92. Plastic	16
	93. Growths and cysts	89
Breast.	94. Radical mastectomy	20
	95. Other breast operations, abscesses, simple amputations	45
Chest.	96. Empyema drainage	13
	97. Phrenic evulsion	4
Miscellaneous.	98. Miscellaneous operations	148
		3,910

Obstetrical and Gynaecological Department.

Obstetrician and Gynæcologist, Dr. Roworth.
Assistant Resident Obstetrical Officer, Dr. Donovan.
Assistant Resident Obstetrical Officer, Dr. Ridehalgh.
Visiting Obstetrician and Gynæcologist, Dr. Rickards.

Dr. Roworth reports as follows :—

Lying-in Wards.

1. *General.*—With 1,629 admissions, this branch of the Maternity Department has passed through the busiest year of its existence. The figure given above does not represent the real achievement, as the number of bookings, which was stepped up in the spring, is now having its effect ; deliveries during the last quarter of the year were at a rate of nearly 2,000, and the December number of 176 women admitted and delivered represents a rate of some 2,100 a year.

This work has been carried out by a nursing staff which, since the beginning of the year when it was just below the numbers allowed, has progressively decreased until it now numbers approximately half what it should be. Sisters and nurses can congratulate themselves upon the smoothness with which the work has been done : they are to be congratulated upon the remarkable freedom during the year from infections in both mothers and babies and the continued good results with our premature infants.

It is doubtful whether this rate of work can be continued indefinitely: this is a Midwifery Department which is run on the principle of having a few trained staff and a large number of pupils. It is in the latter that numbers have fallen off to a very serious extent. Lack of pupils leads to overwork of the trained staff, who must do work which the pupils should do; and to deficiencies in the training of the latter which the trained staff no longer have reasonable time to carry out. Whilst it is possible for a pupil midwife to work at breakneck speed for the six months of her training, it must be remembered that the trained staff are permanent and that there is no let-up for them.

It is certain that this rate of deliveries is beyond the safe capacity of the department as it now stands: this would, of course, be modified if we had a sufficient staff, which we have not. There is no opportunity for structural alterations, in the present allotted space, which would make the department easier or safer to run, without a reduction in the number of beds; and whilst there is a very good case for an increase in the number of wards and other facilities, there can be no object in carrying this out until the problem of staff is overcome.

There is cause for satisfaction that this increase in the number of patients, which we have felt it possible to accept, has been entirely to the advantage of Salford mothers. Bookings and admissions from the County have progressively fallen off since the beginning of the year and, since September, admissions have been confined, to all intents and purposes, to Salford residents.

Admissions have been made upon the following principles:—

1. All Primiparæ without question, so long as they present themsleves before the fifth month of pregnancy.
2. Multiparæ whose home conditions are, for various reasons, unsuitable for the confinement.
3. Multiparæ when there is a medical or obstetric reason for admission to hospital.

Control of admissions and all investigations in relation to those patients under heading (2) above are undertaken by Dr. Sproul and her colleagues.

2. *Medical Staff.*—The permanent medical staff has been increased by the appointment of Dr. Ridehalgh to the position of second assistant resident obstetrical officer. This appointment has relieved the obstetrician of all routine ward work and has allowed him to concentrate on the administration of the department. We have also been fortunate in having, for most of the year, one or two ex-service doctors for training in midwifery. These men have carried out junior resident duties in return for their training, and their presence, together with the two residents, has given us a more balanced staff than we have had before. I am sure that this has been of advantage to the patients and staff, and hope that this happy position will be continued in the future by the appointment of assistant medical officers as a permanent feature of the department.

3. *Nursing Staff.*—Seventy-three pupil midwives have entered for training and 56 have passed their first part State Certified Midwife Examination.

4. *Detailed work of the Department.*—This is given in the figures below, but some explanation must be given on one or two points.

Firstly the number of cæsarean sections performed. I regard some 40 as the " normal " number to be performed in a year. That 81 have been done this year is due to :—

(1) The number of primiparæ of 35 years of age and over ; this is entirely due to the upset of families in the late war. We have followed a policy of regarding the sure production of a live child as of paramount importance in these women.

(2) The number of women who have had a previous cæsarian section. It has been our policy to allow all of these to have a trial labour and many have successfully delivered themselves, but others have had, in the interests of maternal safety, to suffer a second operation.

The number of forceps deliveries is due to these causes :

(*a*) The greater proportion of elderly primiparæ and complicated or abnormal cases.

(*b*) Lack of staff : it is often impossible for that degree of personal attention and encouragement, which can only be attained if an experienced member of the staff can be with a labouring patient continuously, to be maintained ; and consequently the proportion of spontaneous births has fallen off.

It can be said that, in view of paras. (*a*) and (*b*) above, we have not set ourselves out to attain a very low forceps rate during the year.

Women admitted and delivered	1,627
Died undelivered	2
Total admissions	1,629
Children delivered (22 sets of twins)	1,660
Women booked in at the ante-natal clinic :—	
Salford	1,452
Other	33
Total booked	1,485
Unbooked (emergency cases) :—	
Salford	127
Other	17
Total unbooked	144

Normal deliveries	1,288	79%
Cæsarean sections	81	4·9%
Forceps deliveries	178	10·9%
Breech deliveries	76	4%
Face presentations	4	—
B.B.A.	33	—
Manual removal of placenta	16	1·0%
Maternal deaths	8	(12 including 3 abortion deaths and 1 death in early pregnancy from other causes).

Maternal Deaths—Causes.

(1) Advanced pulmonary tuberculosis. Death in puerperium.

(2) Advanced cardiac disease. Non-clinic case.

(3) Intrapartum rupture of the uterus.

(4) Gross air embolism during cæsarean section for placenta prævia.

(5) Cerebral hæmorrhage. This was a normal pregnancy and labour with no signs of toxæmia. Pregnancy had no part in the causation of this hæmorrhage apart from the possibility of the rupture being due to the rise of blood pressure during the expulsion efforts of the second stage of labour. The bleeding was from the left middle cerebral artery and the blood had entered the ventricle.

(6) Eclampsia. A non-clinic case admitted moribund and dying undelivered.

(7) Accidental hæmorrhage. A non-clinic case admitted severely ill with profuse bleeding of " accidental " origin. The infant was lying transverse. The lie was corrected under anæsthetic, but the patient collapsed a few minutes later. Abdominal section was performed in a desperate hope of saving life.

(8) Accidental hæmorrhage. A non-clinic case at the 26/28th week of pregnancy admitted unconscious. There was evidence of a general vascular breakdown and there were large retinal hæmorrhages on both sides. Death took place soon after admission. At post-mortem hæmorrhages were found in the uterus and the majority of the internal organs.

NOTE.—The actual number of maternal deaths occurring in the hospital is twelve, there being three deaths in aborting women, on G.2 ward, and one on N.W.4 ward suffering from rheumatic carditis and specific disease, who was at an early stage of pregnancy : she died undelivered.

Puerperal Pyrexia.

There were 48 patients who suffered a " notifiable " degree of fever.

Causes.

(1) Maternity Unit—43 cases.

Uterine or presumed uterine infection	33
Chest	4
White leg	4
Pyelitis	2

(2) G.2 ward—5 cases.

Following abortion (uterine infection)	3
Admitted as puerperal fever	2

Caesarean Sections.

Number performed	81
Maternal deaths	2
Stillbirths	4

Indication.	*Age.*	*Para.*		*Child.*
Severe toxæmia	41	1	(24 years of age)	L
Placenta prævia, previous C.S.	31	2		L
Toxæmia, transverse lie, membranes ruptured	34	1	(stillbirth)	L
Toxæmia, fœtal distress	34	0		L
Toxæmia, retinitis, 30 weeks	25	0		NND
Disproportion, contracted pelvis, trial labour.	25	1	(NND cerebral hæmorrhage)	L
Breech, version failed	34	0		L
Very severe accidental hæmorrhage	36	2		SB
Fibroids, prolonged labour, fœtal distress	36	0		L
Contracted pelvis, two previous C.S. Trial labour	37	2		L
Disproportion, failed forceps outside	27	2	(ND. smaller infants)	L
Placenta prævia	38	5		L
Disproportion, trial labour	33	0		L
Gross disproportion, previous C.S. (2), sterilised	30	2		L
Severe toxæmia, previous ectopic pregnancy	35	0		L
Breech, obstruction of inferior vena cava	35	0		L
Breech, placenta prævia	32	2		L
Disproportion, trial labour	27	0		L
Disproportion, trial labour	36	0		L
Inertia, 70 hours labour	38	0		L
Acute fœtal distress, Rh negative	29	1	(living)	L
Ovarian cyst in pelvis, ovariotomy	23	0		L
Fœtal distress, trial labour	39	0		SB
Post-mature, fœtal distress, inertia	31	0		L
Toxæmia, disproportion, trial labour	31	0		L
Disproportion, previous C.S.	36	1		L
Prolonged labour, 60 hrs. fœtal distress	26	0		L
Disproportion, failed forceps outside	33	1	(ND)	NND
Gross pelvic deformity	26	0		L
Severe toxæmia, recent widow	42	0		L

Indication.	*Age.*	*Para.*	*Child.*
Disproportion, transverse lie	26	1 (difficult labour)	L
Disproportion, previous C.S.	39	3 (2 SB)	L
Twins, lower child transverse, fœtal distress	34	0	L (1 SB)
Adkylosed adduted L. hip. Disproportion	28	1 (weighed 4lb.)	L
Disproportion, trial labour	23	0	L
Disproportion, deformed pelvis, trial labour	23	0	L
Advanced mitral stenosis, breech, small pelvis	26	0	L
Disproportion, previous C.S.	34	1 (Brow presentation)	L
Prolonged labour (72 hours), deformed uterus	29	0	L
Central placenta prævia	35	1	L
Placenta prævia, previous child 16 yrs. old	45	1	L
Irregular pelvis (T.B.)	27	0	L
Disproportion, previous C.S.	24	1	L
Transverse lie, previous C.S.	35	5 (3 NND)	L
Disproportion, previous C.S.	39	1	L
Long rupture of membranes, fœtal distress	35	0	L
Disproportion, previous C.S.	32	2	L
Fœtal distress	40	0	L
Disproportion, previous rupture of uterus	33	2	L
Flat pelvis	44	6 (3 SB)	L
Gross disproportion, previous C.S.	22	1	L
Contracted pelvis, brow, reduction failed	26	1	L
Fœtal distress, normal labour	30	1 (SB)	L
Accidental hæmorrhage, mother's request	33	0 (2 miscarriages)	NND Sp. Bif.
Gross disproportion	30	0	L
Gross disproportion	39	0	L
Ventral hernia, previous C.S.	38	1	L
Disproportion, transverse lie	33	1 (SB. 5¼lb.)	L
Disproportion, trial labour	24	0	L
Inertia, fibroids, fœtal distress, myomectomy	37	0	L
Rigid cervix, 70 hours labour, fœtal distress	38	0	L
Ovarian cyst in pelvis, ovariotomy	30	0	L
Disproportion, trial labour	30	3 (Breech 1 SB)	L
Previous C.S.	33	2 (2 C.S.)	L
Disproportion, trial labour	28	1 (small child)	L

Indication.	*Age.*	*Para.*	*Child.*
Severe fœtal distress, prolonged labour	34	0	L
Disproportion, mitral stenosis, trial labour	26	0	L
Severe toxæmia	38	1 (SB. Toxæmia)	L
Bad previous history, previous C.S.	38	3 (2 SB)	L
Fibroid in pelvis	37	0	L
Gross fibroids, hysterectomy	37	0	L
Placenta prævia, intrauterine death, sterilised	41	3	SB
Disproportion, very large child, trial labour	31	2 (SB)	L
Previous version, fœtal distress	36	0	L
Rigid cervix, 76 hours labour	32	0	L
Central placenta prævia	30	7	L
Disproportion, trial labour	38	0	L
Severe toxæmia, retinal detachment	32	0	L
Disproportion, failed forceps outside	25	0	L

Maternal Deaths (2).

(1) Gross air embolism following operation.
Indication—placenta prævia.
Para I, age 45 years.

(2) Accidental hæmorrhage. This was a severe progressive form of this complaint and operation was done as a last effort to save a moribund patient.

Still-births (4).

(1) One of twins—transverse lie.
(2) Placenta prævia—intra uterine death.
(3) Accidental hæmorrhage—intra uterine death.
(4) Too severe trial of labour.

Of these patients—

35 were parous (11 had still-births before).
30 were 35 years of age or over.
55 were 30 years of age or over.
15 had previous cæsarean sections.

Contractions :—L—living. SB—still-birth. NNDneo-natal death.

Infant Statistics.

Stillbirths	...	67	... 40·3/1,000 births.

Causes

Abnormal Infants—		
Hydrops fœtalis	2	
Anencephalus	6	
Hydrocephalus	5	
Spina bifida	2	
Meningocele	1	
		16
Cerebral haemorrhage		4
Morbus Cordis		1
Asphyxia—		
Antepartum hæmorrhage	13	
Prolapse of cord	3	
Short cord	1	
Breech delivery	4	
Infarcted placenta	1	
Failed forceps	1	
Prolonged labour	2	
Internal version	1	
Cause unknown	5	
		31
Macerated foetus		15
Total		67

Neo-natal deaths ... 62 ... 38·9/1,000 live births.

Causes

Prematurity (20 under 3lb.)	29
Atelectasis	2
Bilateral otitis media	1
Bronchopneumonia	8
Anencephalus	1
Hydrops fœtalis	2
Meningocele	1
Spina bifida	5
Cerebral hæmorrhage	8
Hæmorrhagic disease of newborn	4
Congenital morbus cordis	1
Total	62

Ante-Natal Ward (B.1).

This most useful ward showed a turnover of 873 cases in the year. It is the pivot upon which the whole maternity unit turns, allowing us, as it does by its generous size, to admit any case whether it is for treatment of disease or merely for rest and to build up the patient's condition against the onset of labour and the burdens of the puerperium.

Admissions—873 (including transfers.

Transferred to labour ward	580
Discharges	295
Deaths	0

Reasons for Admission—

In labour or ? in labour	184
Induction, trial of labour, post-mature	124
Hypertension	81
Toxæmia of pregnancy	67
Breech for version	56
Cardiac disease	53
General debility	39
Antepartum hæmorrhage	37
Twins, rest before delivery	20
Varicose veins	5
Premature labour	8
Premature rupture of membranes	20
W.R. positive for penicillin course	4
Abortion or threatened abortion	5
Intra uterine death	3
Hydramnios and abnormal fœtus	13
Ovarian cyst or fibroid and pregnancy	12
Chest complaints	24
Rhesus factor: for observation	3
Anæmia and blood transfusion	5
Diabetes	4
Hyperemesis gravidarum	23
To await cæsarean section	9
*Puerperium	4
Miscellaneous minor complaints	32
Acute infections	1

* Admitted when a lying-in ward was closed.

Breast Feeding Clinic.

This clinic exists to help newly-discharged mothers with any difficulties they may have in the early stages of breast-feeding and to assist in the maintenance of the flow of milk in cases where its sufficiency is in doubt. It has also come to be regarded as a place where inexperienced mothers having any difficulties can bring their babies for advice.

The facilities provided comprise a comfortable furnished room where the mothers can spend the day, with one corner screened off for privacy. There are cots for the babies and kitchen facilities so that the mothers can have meals during the day.

The clinic is appreciated and does good work, but there can be no doubt that it suffers from the disadvantages of being situated at one end of Salford. It is a long way to walk with a pram from most parts of the City and it is an equally long carry if the journey is made by bus—it is felt that this keeps some patients away who would benefit if they came to the clinic.

	1944.	1945.	1946.
Number of attendances	637	602	2,539
Number of mothers	106	131	276
Average attendances per mother...	6·01	4·5	9·2
Results :			
Fully breast fed babies	63 (59%)	76 (58%)	164 (59·7%)
Partially breast fed	39 (36·3%)	50 (38·3%)	103 (37·2%)
Artificially fed babies..........	4 (3·7%)	5 (3·8%)	9 (3·1%)

Abortion and Septic Midwifery.

G.2 WARD.

1. *Septic Midwifery* (*G.2X Ward*).

The majority of patients under this heading are transferred from the midwifery department.

Whilst conditions in the structure of the ward are by no means very suitable for the admission of these patients, isolation for instance being impossible, results have been uniformly satisfactory and it has become our habit to receive such patients whatever the casual organism. This would not have been possible before the advent of the new anti-biotic drugs.

It has not been our policy to accept septic puerperal patients from outside the hospital because of the above-mentioned unsuitability of the ward and also because of the size of the unit, which restricts our total to five at any one time—this is due to the smallness of the nursery. Transfers into the ward from the midwifery department numbered 140. Not all these cases were of puerperal sepsis : a number were mothers of still-born infants or late miscarriages which had taken place in the former department : these patients were nursed, as a rule, in the general ward.

2. *Abortions* (*G.2 Main Ward*).

The continued admission of an astounding number of patients to this ward is a matter for wonder ; it draws attention also to the striking need for a ward to deal with this type of case in any area.

Abortion, untreated or insufficiently treated, not only leads to much loss of time, but is a cause of more misery, ill-health and future gynæcological and obstetric complications than any other single illness. Its price in sterility and unfertility cannot be assessed. Salford is fortunate in the facilities which are provided for dealing with these cases. This ward also deals with overflow gynæcological cases.

Admissions.	*Mothers.*	*Babies.*
From outside	599	14
Transferred from maternity wards	148	80
Births	—	4
Total	747	98

Of 599 admissions some 180 or 30 per cent. were from the county area.

Reasons for Admission—

Abortion and threatened abortion	506
Puerperal infections	85
Breast infections	5
Ante-natal cases	37
Gynæcological cases	40
Secondary post-partum hæmorrhage	9
Salpingitis	5
For extraction of teeth	15
Normal puerperium (still-births, etc.)	32
Premature labour	2
Miscellaneous	11
Total	747

Procedures—

Curettage of the uterus	356
Blood transfusions	37

Deaths—

Adults	4

Causes—

1. Puerperium—severe valvular disease of the heart and myocarditis.
2. Abortion, mitral stenosis, nyocarditis.
3. Antepartum hæmorrhage, 28th week, shock, placenta prævia, debilitated patient.
4. Abortion, peritonitis.

Babies.—All below 2 lbs. ... 3

Gynaecological Department.

N.W. 3 WARD.

A larger number of patients than ever before has been dealt with in N.W.3 ward and in the gynæcological clinic. Sister and her staff are to be congratulated upon the smooth working of the ward and the excellent results despite this increase of work.

It must be pointed out that there is considerable doubt as to whether sufficient patients will be forthcoming to justify the continuation of the gynæcological department at its present size. Since September, admissions have been largely confined to Salford residents, and it is not certain that Salford can provide sufficient gynæcological patients to fill the wards. On present showing, even with the transfer of certain Salford cases from the waiting list of Salford Royal Hospital, the department could not be said to be busy.

The following are the figures :—

Admissions to N.W.3 ward	673
Operations performed	568
Abdominal Operations—	
1. Hysterectomy	58
2. Others	55
Major Vaginal Operations—	
1. Vaginal hysterectomy	10
2. Colporrhaphy, etc.	70
Minor Gynaecological—	
1. All types	375
Deaths—	
Gynæcological patients	4
Medical patient—bronchitis (all medical beds occupied)	1
Gynaecological Causes—	*Age.*
1. Malignant overian cyst	26
2. Malignant ovarian cyst	32
3. Carcinoma corpus uteri	58
4. Prolapse—bilateral pyo-nephrosis	59

Maternity and Gynaecological Clinics.

(1) *Maternity—*

New ante-natal patients	1,957
Ante-natal attendances	13,368
Post-natal attendances*	796
Total	16,121

Proportion of mothers attending the post-natal clinic—49 per cent.

(2) *Gynaecological Clinic—*

New patients	958
Old patients	1,306
Total	2,264

Total Visits—

Ante-natal	15,325
Post-natal	796
Gynæcological	2,264
Total	18,385
Total in 1945	14,622
Blood samples taken (for W.R. and Rhesus factors	2,054

Laboratory.

City Pathologist, Dr. G. J. Crawford.
Assistant City Pathologist, Dr. L. Stent.
Bio-chemist, Mr. W. Portwood.

Dr. Crawford reports as follows :—

The appended table gives a list of the investigations carried out at the Clinical Pathology Laboratory during 1946.

The total number of specimens examined was 34,692.

It has been recognised for some time that the number of specimens examined is not a fair criterion of the amount of work done in the laboratory, as each test is now evaluated in terms of units as recommended by the Ministry of Health Emergency Hospital Service.

For example, a swab examined by smear and culture for diphtheria bacillus and Vincent's angina represents five units. Complete examination of a cerebro spinal fluid may be over 20 units. The number of units totalled by the 34,692 specimens mentioned above is 116,781.

The table does not include the 1,496 donors bled for the blood bank under the Ministry of Health Regional Blood Transfusion Service as this work, although done at the hospital and supervised by the laboratory staff, is no longer the responsibility of the Corporation. The advantages of having a blood bank on the spot with ample fresh blood are, however, obvious.

As stated in previous reports our present premises are cramped and do not allow us to cope with the rapid extension of work which is inevitable. New premises are under review and it is hoped these will be fitted up in the near future.

Bacteriological Examinations :	*Units.*
Swabs for K.L.B.	8,195
Swabs for hæmolytic streptococci	3,660
Urines	6,339
Cervical swabs	1,134
Eye Swabs	325
Stools for organisms	4,140
Exudates	3,155
Sputa for tuberculosis	3,206
Smears for gonococci	574
Blood cultures	745
Anærobic cultures	85
Penicillin sensitivity tests	153
Coagulase tests	225
Streptococcal groupings	210

Biochemistry :

Blood sugars	8,696
Fractional test meals	2,080
Urea clearance	4,140
Blood urea	1,865
,, cholesterol	335
,, proteins	618
,, chlorides	180
,, sulphonamides	508
,, calcium	35
,, spectroscopic examination	6
,, sodium	70
,, potassium	40
,, inorganic phosphate	12
,, uric acid	18
Van den Bergh	280
Acid phosphatase	225
Alkaline phosphatase	155
Hippuric acid excretion	70
Stools for occult blood	656
,, fat	210
Urine for ascorbic acid	116
,, lead content	15
,, general examination	4,113
,, for diastase	16
,, bromides	10
,, for 17 ketosteroids	60
Colloidal gold	258
Tryptophane reaction	30
Miscellaneous	20

Haematology :	
Full blood counts	5,038
Reticulocyte counts	1,518
Red cell counts	524
White cell counts	1,124
Hæmoglobin estimations	2,270
Blood groupings	1,154
Compatibilities	1,530
Blood sedimentation rates	2,196
Films for parasites	150
Platelet counts	63
Coagulation time	120
Prothrombin index	68
Paul Bunnell reactions	30
Sternal punctures	60
Red cell fragility	45
Groupings for Rh factor	861
Pathology :	
Cerebro spinal fluid	2,320
Pleural fluids	475
Autopsies	4,120
Sections (histological)	9,163
Smears for trichomonas	490
Vaccines	20
Guinea pig inoculations	6,010
Sperm counts	35
Immunity tests	444
Sterilister efficiency tests	48
Penicillin preparations :	
(*a*) solutions	5,392
(*b*) cream	4,900
(*c*) powder	710
Miscellaneous	370
National Blood Transfusion Service :	*Units.*
Blood groupings	400
Plasma withdrawn	750
Ladywell Sanatorium :	
Swabs for K.L.B.	1,790
Miscellaneous	957
Total	116,781

Nursing Staff.

Miss K. Martin, Matron, reports as follows :—

During the past year, the work of the hospital has increased. It has been a full and eventful year and I feel that much progress has been made in the nursing and midwifery schools in spite of staff shortages and difficulties.

From October, 1945, to October, 1946—63 student nurses have commenced and 61 completed their training. The Ministry of Labour controls were removed early in the year, thus giving the graduate nurse freedom of choice of work, and freedom of movement also. Most of them chose to do six months' staff nurse's duties before proceeding to take Part I midwifery training, or other types of work. I am glad that our nurses have taken this opportunity, for I consider that the first year after State Registration is an important one, and if spent in one's training school, gives that added confidence so necessary before taking on the full responsibilities of a State Registered Nurse.

With the removal of controls we had hoped for some of the lessening of the burden on the ward and departmental sisters, but the effect of the extra help they have had of having staff nurses has been nullified by the shortage of student nurses. We suffer this in common with the majority of hospitals to-day, and things have become so acute that we have had to revise our staffing standards. We have instituted the employment of ward orderlies, both men and women, in order to relieve the pressure of work and so release the nurse for purely nursing duties.

The examination results have again been satisfactory. The State Examinations have been held three times during the year, reverting to the pre-war system. Sixty-one candidates entered and 58 were successful. For the Preliminary State Examination 69 entered and 62 passed.

The midwifery school showed encouraging signs in 1945 but while the work still increases, our flow of pupils has decreased, and all members of the department, whether midwives or pupils have been much over-worked. I wish to stress that this is in common with every midwifery hospital in the country, whether training school or otherwise. With the rising birth rate, and the lack of home facilities, it is obvious that the hospitals have had to face a heavy burden, The present-day pupil lives at such a quickened pace, that she is discouraged from continuing with midwifery and taking per Part II training. Those that do proceed to district work, however, see midwifery in its true perspective, in spite of the fact that domiciliary midwives are also much over-burdened.

During the year 53 pupils have entered for Part I of the Central Midwives Board Examination, and 42 have passed. Since December, 1945—12 nurses have proceeded to the Royal District Nurses' Home, Salford, for Part 2 of their training and all have qualified as midwives. Of the other trainees, 37 took their Part 2 training at other schools, and we are content to feel that we have contributed towards the country's midwifery service.

We continue to give the Gas and Air Analgesia Course, but owing to the new requirements by the Central Midwives Board, we have had to limit our number to those within the School, and we have been unable to take all the domiciliary midwives that we should have liked. Certificates of proficiency have been awarded to 24 midwives during the year.

We have had another year of changes on the staff. Miss Woodhouse, Miss King and Miss Moore have all left to take senior administrative posts in other hospitals. In June, Miss D. Shore was appointed Assistant Matron in succession to Miss H. King and Miss B. Leahy appointed Assistant Home Sister in place of Miss G. Moore. Miss Walton, Senior Tutor left to take the Nurse Administrator's Course in London, and her place has been taken by Miss I. L. Morrison. We welcome Miss Ryan, Sister Ogden and Sister Welham, who have returned from their service with the Q.A.I.M.N.S.

The social side has not been neglected. The tennis team reached the semi-finals of the Sparshott Cup and the hockey team continues to show enthusiasm. We should like to see more juniors participating, but we find so many of our new entrants have not had the advantage of following various sports, owing to the war years.

The Student Nurse Association orgnised many enjoyable dances, and during the year we held a successful sale of work. This was in aid of the Empire Nurses Abbey War Memorial Fund, and we sent in all, the sum of £271, commemorating in particular, Miss Ross and four members of the Overseas Nursing Service, who lost their lives on war service.

On the whole, I think we are upholding the " Hope " traditions of good nursing service to the public.

General Department.

Mr. C. A. A. Hankins, Secretary-Steward, reports as follows :—

During the year ended 31st December, 1946, the following work has been carried out :—

Ward F.1 has been plastered and redecorated. Additional windows and radiators were installed on this ward.

Ward E.3 which was used to house the stores of the hospital has been reconditioned and redecorated, and is now occupied by patients. Fluorescent lighting has been installed. This type of lighting has also been installed on the ground floor wards B.1, E.1, F.1, G.1, and H. 1.

The following wards have been redecorated—N.W.2 and N.W.4.

Gas geysers have been fixed in the kitchen of the wards to ensure an adequate supply of boiling water. The geysers have also been fixed in the dispensary and medical officers' quarters.

Nurses' Home.

The recreation room and several bedrooms, corridors and stair-wells have been redecorated.

Certain store rooms have been altered to make airing rooms.

Disused ablution rooms near the recreation room were converted into a cooks' room.

New linen stores were made by conversion of a disused short corridor.

Water service mains have been laid on to fix hose reels for use in fire prevention.

Operating Theatre.

This unit has been partly redecorated.

Boiler Plant.

Extensive repairs have been carried out on the boiler feed pumps and vacuum pumps.

The drains of the calorifiers and pump house have been renewed and re-run.

General.

The passenger lift of N.E. pavilion has been thoroughly overhauled. New motor and driving gear has been installed.

The gas decontamination unit has been reinstated to its former use as concert hall and ancillary offices, which house the teaching and occupational therapy staffs. Climbing bars and equipment have been installed in the concert hall so that it may be used for gymnastic exercises.

The blast walls round the wards have been demolished.

The old boiler house has been converted into a useful store.

Additional loudspeakers on the internal call system have been installed.

The water tank has been renewed in the laundry.

A new vegetable boiler has been installed in the hospital kitchen.

The following departments have been redecorated during the year :—

- Medical Officers' quarters.
- Laboratory.
- Physio-therapy department.
- X-ray department.
- Hospital lodge.
- Corridors and stairwells of N.E. and N.W. blocks.
- Main corridor from E. pavilion to offices.
- E. pavilion stairwell.
- Portions of the outside of the nurses' home and hospital.

Grounds.

The grounds have been kept as colourful as possible. A new flower bed has been made along the wall from the old boiler house, to the petrol pump. The flowers during the season were very bright and were encouragingly commented on.

Ambulance Department.

This department has been kept very busy during the year and the work has been cheerfully performed.

The work of the maintenance staffs and hospital porters has been carried out very efficiently during the year.

The office staffs continue to carry out their work satisfactorily and cheerfully.

During the year several members of the various staffs have returned from service with His Majesty's Forces. They are welcomed back wholeheartedly.

Almoner's Department.

Miss Van Gelder reports as follows :—

A department to deal with social welfare in the hospital was started at the end of July, 1946, and a survey of the work done during the first five months indicates the need that existed for a service of this kind.

It was felt from the first that it would be impossible for a comprehensive service to be provided for the whole hospital by one person, and the alternatives appeared to be, dealing inadequately with all departments, or giving intensive service to one section, letting the others refer cases of special need. The latter course was chosen and it was decided that the unit for intensive work should be the medical department, not that the latter was more important than the others but because the needs of these patients are sometimes less obvious and might not so easily be referred.

The bulk of the work has thus been done among the medical patients. Every patient admitted to the medical wards is interviewed in an endeavour to find if there is any factor in his social circumstances contributing to his illness or likely to hinder his recovery. Such factors are reported to the doctor and, where possible, efforts made to assist the patient to overcome them. In many circumstances the cases are satisfactory but in others difficulties are revealed which might not otherwise have come to light, and which on the patient's discharge might have undone much of the good derived from the medical treatment. Thus, J.D. was a man suffering from a rheumatic condition particularly affecting his legs and feet. It was found that his work involved much walking about, frequently in an exposed atmosphere. It was possible to negotiate with his employers and a more suitable job was found.

A total of 462 medical patients were interviewed and 80 required definite assistance. Arrangements were made for nine to go away for convalescent treatment on discharge. Financial help of different kinds was obtained for 13 patients to assist them to meet particular expenses, such as diet, laundry, etc. Fourteen patients were assisted regarding more suitable work. On six occasions when patients had no one to look after them on discharge, arrangements were made for home helps. In cases where accommodation was unsatisfactory, the Housing Department was approached to give priority for rehousing. Arrangements were made for children while their mother was in hospital, on five occasions. Many other forms of help have been given, negotiations over pensions and Health Insurance, extensions of leave for relatives in Forces to help over difficult periods, help with travelling, assistance to find accommodation on discharge, to mention only a few. Sometimes the work done might appear too trivial to count in statistics, a word of advice on how to claim Health Insurance or obtain a supplementary pension, but by putting a patient's mind at rest, it can contribute towards recovery. It is estimated that of the patients interviewed in the medical wards about 40 per cent. required some form of help.

It might be felt that if the circumstances of the remaining 60 per cent. were satisfactory, time is wasted in interviewing them. However, reports are available for the medical staff if required and the needs of only about 10 per cent. of the 40 per cent. who needed help would probably have been apparent had the patients not been seen.

Examples of ways in which help can be given :—

D.M. was a widow, aged 60, who had maintained herself by running a small business. She was taken ill and admitted to hospital and it was found that she would not be able to carry on working. She had no pension and her income was low. An approach was made to a charitable pension fund and a weekly grant was made which will enable her to maintain herself.

Joan and Andrew were sister and brother in hospital suffering from a heart conditions. Both their parents were dead and the care of the family of five children was in the hands of an elder sister, aged 19. She was doing her best in difficult circumstances but the care of these two, who required special supervision on discharge, would have been a very heavy burden. It was possible to arrange for Joan and Andrew to be admitted to Heart Schools where they would have the care they needed, the Education Committee meeting the cost.

E.P. was a boy of 17 who had been admitted after collapsing in the street. It was found he had run away from his home in the Midlands and had been wandering about the country. He appeared to be very unstable and dissatisfied. It was possible to get in touch with his parents and, through their local welfare office to arrange for his return home. Clothing was provided as he had sold most of his own. On his return, arrangements were made for him to see a psychiatrist and it is hoped that it will be possible to settle his difficulties to place him in congenial work.

About 25 per cent. of the work done was referred by departments other than the medical. Thirteen patients were referred from the orthopædic department for assistance of different kinds. In four cases help was given in arranging for patients to return to their own homes some distance away and for the continuation of treatment. Five were advised regarding a change of employment and two over pension claims, while arrangements were made for the care of a child whose mother had to be in hospital over a long period. One patient was sent for convalescence with her child on discharge from hospital.

Ten patients were referred from the surgical department, six for assistance with finding more suitable employment, two for help with children while in hospital for operative treatment, one for assistance with accommodation on discharge, and one for convalescence. Fourteen patients were seen from the maternity and gynæcological department, nine for assistance with the care of children while in hospital, three for help in arranging for accommodation on discharge, one for a home help, and one for convalescence.

An example of the type of arrangement that has to be made can be found in the case of Mrs. G. She was attending the ante-natal clinic and her condition made it necessary for her to come into hospital for several weeks prior to her confinement. She was very worried about leaving her family of four children particulary as the house had been damaged during the floods. Relatives were able to care for two and it was possible to arrange for the other two to be admitted to a seaside home. The cost was £1 1s. 0d. per week each, and an approach was made to the British Legion who very kindly agreed to meet this expense. Mrs. G. was able to come in with an easy mind while the children greatly benefited from a holiday.

Twenty-eight children were referred, 18 for convalescence, and arrangements were made for their admission to various homes. In many cases the Education Department are responsible for the cost, in other cases the expense was shared between the patients, the Invalid Childrens' Aid Association, the British Legion, and the Almoner's Samaritan Fund. Five children were found to be living under unsuitable housing conditions and approaches were made to the local authorities in an effort to rectify this. Three children were helped with clothing, arrangements were made for one to attend an open-air school, and special supervision from the health visitor was arranged for another.

The old people, who although not ill, require looking after on discharge and come in a separate category. Fifty such patients were referred to the department. In 24 instances, assistance was required with arrangements for discharge. In some cases relatives could take them, in others admission was arranged to the Old People's Homes, in one to the Homes of the Little Sisters of the Poor, and one to Nell Lane Institution, Manchester.

An example of this kind of help may be seen with Miss A.B. She was a woman of 68 who had been a professional worker. She was retired and lived in her own house on superannuation. When taken ill she had no one to look after her and was admitted to hospital. She recovered and while not requiring further treatment was not considered fit to be on her own. It was possible to arrange for her admission to a small home for ladies which was within her means and she was so comfortable there that she has now given up her house and has made it her permanent home. Two patients were helped with pension difficulties, one with housing, one with rent while in hospital, and two with clothing.

Patients are referred from all departments for the supply of surgical appliances and 28 appliances were obtained up to the end of the year. In some instances the person concerned is able to pay the full cost of the appliance. When they cannot do so an effort is made to obtain assistance from approved societies and other sources, or the patient is assessed to pay according to his means. In five cases the full cost was paid by the patient. In seven cases the approved societies helped with grants totalling £23 14s. 6d. In three cases the British Legion was approached ; for one appliance for a child the Education Department accepted responsibility ; and for another the Lancashire County Council. Eleven patients were assessed to pay.

A Samaritan Fund of £50 was granted to the department and has been of great value. Unless the cost of convalescence or some other expense can be guaranteed there is frequently delay in making arrangements, and the Fund has enabled patients to be sent away, the cost generally being recovered from other sources later. In some instances where help from other funds was not available, grants have been made. Twenty-five shillings were paid for one patient to keep up insurances during the two months she was in hospital, which would have otherwise lapsed. Two pounds each was contributed towards the cost of convalescence for two patients, the balance being met by their own contributions and grants from other funds.

It is realised that there are probably many patients in the hospital, whom the department could help, who are discharged to unsatisfactory conditions or whose recovery is delayed by social factors outside the scope of medical treatment. However, it is at present impossible to interview admissions to all the wards and until the department can be extended it is necessary to rely on the medical and nursing staffs to refer such patients whose needs are apparent. Their co-operation in this respect is much appreciated and I should like to take this opportunity of thanking them for their help during these first months. It is hoped with their continued assistance to develop the work further in 1947.

STATISTICS.

1. GENERAL—	1944.	1945.	1946.
Total hospital beds	1,004	1,010	1,023
In hospital on 1st January	713	758	765
New admissions	8,930	9,236	9,214
Live births	1,377	1,384	1,556
	11,020	11,378	11,535
Discharges during the year	9,282	9,541	9,901
Deaths	980	1,072	921
Remaining in hospital at the end of year	758	765	713
	11,020	11,378	11,535
Mortality	8·9%	10%	7·9%

2. X.RAY DEPARTMENT—			
Number of patients	6,328	6,788	8,038
,, out-patients	2,655	2,931	3,424
,, in-patients	3,673	3,857	4,614

Details of X-rays taken :—

Chest		3,821
Genito-urinary		339
Cholecystography		185
Gastro-intestinal—		
barium meal	806	1,064
,, enema	210	
œsophageal	48	
Abdomen (general)		224
Bones and joints		1,851
Midwifery and gynæcology		651
Eyes, jaws, sinuses		176
Total examinations		8,311

3. PHYSIOTHERAPY DEPARTMENT—

	1941.	1942.	1943.	1944.	1945.	1946.
Total treatments	19,759	31,491	24,208	30,937	31,825	27,271

(a) *Massage :*	1944.	1945.	1946.
Number of in-patients	283	287	275
,, out-patients	658	494	380
	941	781	655
Number of treatments :			
In-patients	9,809	7,654	4,655
Out-patients	8,497	9,211	8,575
	18,306	16,865	13,230

(*b*) *Electro-therapeutics :*			
In-patients	212	240	197
Out-patients	820	555	503
	1,032	795	700
Number of treatments :			
In-patients	2,442	4,185	3,232
Out-patients	10,189	10,775	9,965
	12,631	14,960	13,197
(*c*) *Rehabilitation* (since 9th April, 1945) :	1944.	1945.	1946.
Exercises in wards		21,149	29,880
,, hall		1,553	1,954
		22,702	31,834
(*d*) *Sunlight :*			
New in-patients		30	20
New out-patients		48	39
Number of treatments :			
In-patients		198	279
Out-patients		1,189	565
		1,387	844

4. OUT-PATIENTS DEPARTMENT—

Dressings and treatments	9,902	9,001	7,780
Consultations	15,818	17,997	17,375
	25,720	26,998	25,155
Surgical Clinic (full-time staff) :			
Old patients	2,102	3,088	2,788
New patients	1,102	1,321	1,377
	3,204	4,409	4,165
Surgical Clinic (visiting staff) :			
Old patients	700	610	350
New patients	401	226	112
	1,101	836	462
Varicose Veins Clinic :			
Old patients	996	1,002	914
New patients	104	192	179
	1,100	1,194	1,093

Casualties	297	324	692
Ear, Nose and Throat Clinic	1,958	1,726	1,146
Orthopædic Clinic	1,373	1,622	1,545
Gynæcological Clinic	1,679	2,085	2,264
Medical Clinic	3,265	3,357	3,644
Children's Diseases Clinic	502	482	512
Phychiatric Clinic	834	969	615
Special Medical Investigation Clinic	118	77	88
Skin Clinic	406	805	816
V.D. Investigation	11	12	9
Eye Clinic	—	—	212
Chiropody Clinic	—	—	112

VENEREAL DISEASES—

Female (Ward E.1X) :	1944.	1945.	1946.
Admissions	45	115	103
Discharges	39	117	105
Deaths	—	—	—
Number of patients in hospital on 31st December	6	5	3

Male (Ward E.2X) :	1944.	1945.	1946.
Admissions	79	117	112
Discharges	78	116	106
Deaths	2	—	—
Number of patients in hospital on 31st December	4	2	3

TREATMENT OF CANCER—

Number of patients referred to the Radium Institute during 1946	73
Number of patients referred in previous years and re-treated in 1946	7

Analysis of cases :—

Number of patients treated by radium	19
,, ,, ,, X-rays	31
,, ,, ,, gold seed implant	1
Other treatments	3
Number of patients not treated	24
	78

Analysis of cases not treated :—

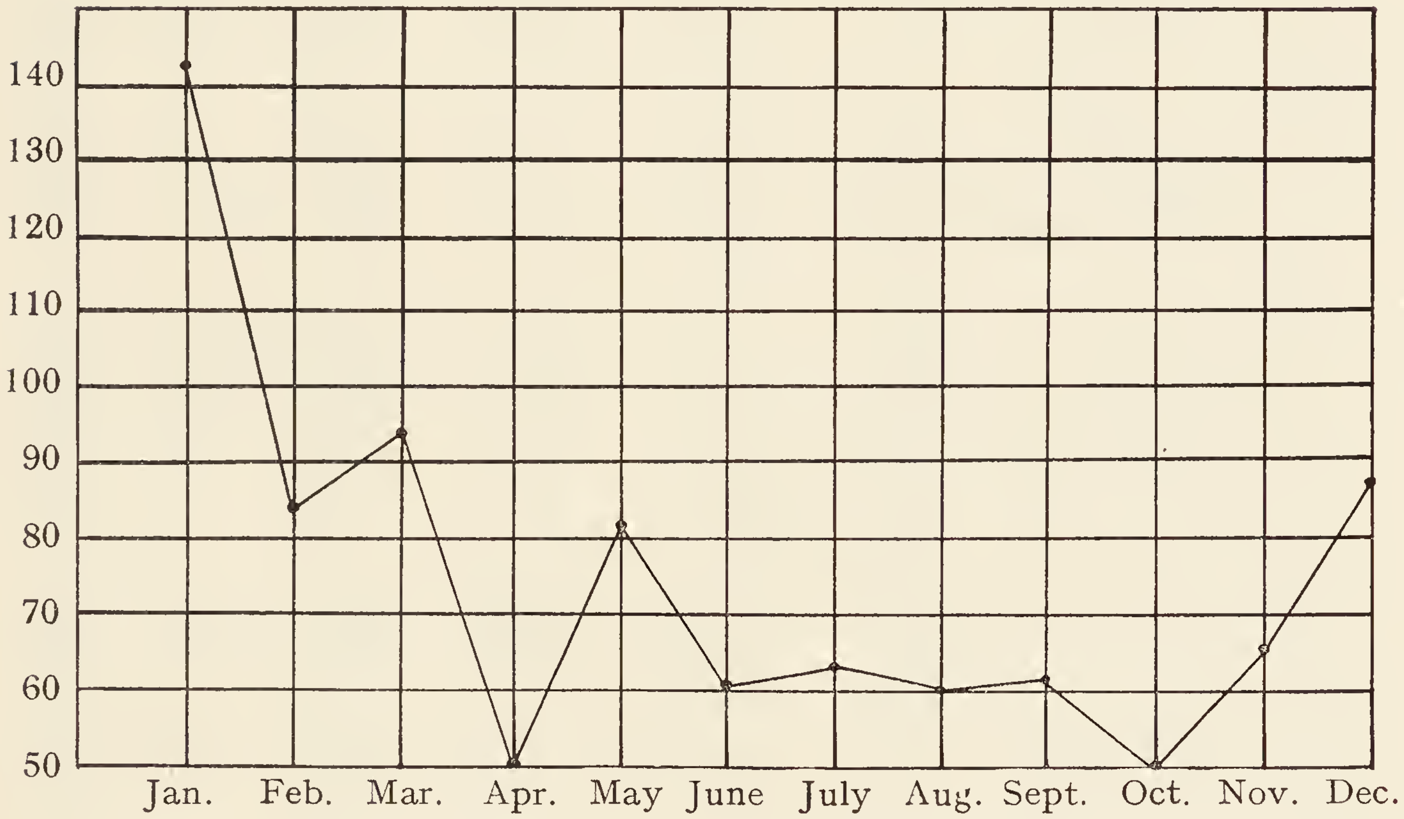
Unsuitable	4
Too advanced	10
Follow-up only	8
Referred elsewhere	1
Referred to surgery	1
	24

DEATHS—

Total number of deaths	921
Analysis of deaths :—	
Tuberculosis (all forms)	16
Cancer	157
Maternal deaths	12
Senility	167
Respiratory diseases	187
Cardiac diseases	92
Gastro Intestinal diseases	52
Genito-urinary	56
Accidental death	32
Other causes	150
	921

Dying within 24 hours of admission—81 (8·8%)

TABLE SHOWING INCIDENCE OF DEATHS THROUGHOUT 1946.



SUMMARISED STATISTICS RELATING TO HOPE HOSPITAL.

	1943.	1944.	1945.	1946.
1. NUMBER OF PATIENTS TREATED	10,457	11,020	11,378	11,535
2. X-RAY DEPARTMENT—				
Number of patients treated	6,191	6,328	6,788	8,038

3. PHYSIOTHERAPY DEPARTMENT—				
Number of massage treatments.......	13,763	18,306	16,865	13,230
Number of electro-therapeutic treatments	10,445	12,631	14,960	13,197
Number of ultra-violet ray treatments	—	—	—	844
	24,208	30,937	31,825	27,271
Rehabilitation treatments	—	—	22,702	31,834
4. OUT-PATIENTS DEPARTMENT—				
Number of dressings and treatments	12,621	9,902	9,001	7,780
Number of consultations	14,285	15,850	17,997	17,375
	26,906	25,752	26,998	25,155
5. SURGICAL WARDS—				
Number of operations performed ...	3,792	3,680	3,946	3,910
No. of out-patients (general)	4,094	5,672	6,539	6,412
Orthopædic Department :				
New admissions	320	532	384	286
Out-patient attendances	1,479	1,373	1,622	1,545
Ear, Nose and Throat Department :				
Patients	1,903	1,958	1,726	1,146
Operations..............................	1,133	800	826	685
6. MEDICAL WARDS—				
Notification of infectious diseases ...	322	237	153	209
Out-patient attendances	3,344	3,383	3,357	3,732
Electrocardiograms.......................	526	542	571	666
7. MATERNITY DEPARTMENT—				
Deliveries..................................	1,316	1,461	1,438	1,627
Ante-natal attendances	10,444	11,177	11,839	15,325
Post-natal attendances..................	702	746	698	796
Puerperal pyrexia........................	51	22	18	48
Maternal deaths (whole hospital) ...	11	13	8	12
8. GYNAECOLOGICAL DEPARTMENT—				
Out-patient attendances	1,485	1,679	2,085	22,64
Number of operations	791	917	957	924
9. V.D. WARDS—				
Number of cases	78	124	232	215
10. CHILDREN'S DISEASES CLINIC—				
Number of attendances	384	502	482	512
11. PSYCHIATRIC CLINIC—				
Number of attendances	382	834	968	615
12. CANCER TREATMENT—				
Number of cases	73	60	68	85
13. PATHOLOGICAL INVESTIGATIONS	31,499	34,917	34,314	34,692

TABLE SHOWING THE WORK OF THE HOSPITAL SINCE 1914.

Year.	*Admissions.*	*Births.*	*Discharges.*	*Deaths.*	*Average Daily. No*	*Operations.*
1914.......	2,728	12	2,135	591	749	149
1915.......	1,632	4	1,393	491	514	160
1916.......	1,330	—	941	353	439	175
1917.......	1,263	3	1,058	335	407	145
1918.......	1,402	16	1,104	391	303	144
1919.......	1,559	7	1,066	348	339	107
1920.......	2,516	64	1,736	451	689	163
1921.......	3,335	227	2,899	617	858	332
1922.......	3,720	263	3,272	745	888	395
1923.......	4,463	250	3,749	815	870	430
1924.......	4,416	182	3,742	922	811	823
1925.......	5,315	293	4,292	1,015	868	802
1926.......	5,471	366	4,839	903	943	882
1927.......	5,801	409	5,125	1,003	943	882
1928.......	6,430	559	5,545	926	960	1,076
1929.......	7,477	674	6,936	1,141	918	1,405
1930.......	7,583	685	7,150	1,038	969	1,807
1931.......	7,963	812	7,762	1,093	919	2,004
1932.......	8,521	843	8,156	1,052	961	2,186
1933.......	8,031	615	7,572	1,084	940	2,201
1934.......	7,893	745	7,548	1,081	940	2,080
1935.......	8,371	782	8,079	1,020	912	2,152
1936.......	9,504	961	9,291	1,122	977	2,691
1937.......	10,156	1,086	10,012	1,241	1,021	3,035
1938.......	11,059	1,312	10,042	1,077	937	2,970
1939.......	8,939	1,285	9,043	1,108	867	2,518
1940.......	9,616	1,338	10,746	1,483	1,060	2,521
1941.......	6,155	574	5,098	911	444	2,337
1942.......	7,835	1,154	7,760	894	648	3,392
1943.......	8,489	1,316	8,797	927	707	3,792
1944.......	8,930	1,461	9,282	980	740	3,680
1945.......	9,236	1,445	9,541	1,072	800	3,946
1946.......	9,214	1,627	9,901	921	762	3,910

MEDICAL HISTORY OF THE WAR.

HISTORY FROM 3rd SEPTEMBER, 1939, TO OCTOBER, 1942.

Salford was fortunate in enjoying complete freedom from casualty-causing raids for a period of twelve months from the outbreak of war. From the first, however, it was realised that, however long or short the spell of immunity might be, the time thus gained must be spent in intensive preparation for the trials and afflictions which, it was confidently expected, would have to be faced at a later date. A large proportion of the Civil Defence personnel—both whole-time and part-time—who were recruited in the early days of the war, possessed inadequate First Aid training, and the energies of the Senior Officers were mainly directed to ensuring that a proper standard of training should be attained as quickly as possible. In this, they were assisted by events in other parts of the country, which helped to maintain in the minds of the personnel a constant expectancy of raids in this locality.

It may be well to preface the History by remarking that, from certain points of view, Salford would appear to present an ideal target for hostile aircraft, inasmuch as it had, at the outbreak of war, approximately 200,000 inhabitants compressed into just over 5,200 acres, in addition to a large number of industrial premises of various kinds. From this, it is evident that the casualty and damage incidence might be expected to be exceptionally high as compared with less crowded areas.

The First Raid—5th September, 1940.

The first raid in which casualties occurred in Salford took place on 5th September, 1940, on which occasion, judged by later standards, the casualty roll was very light, only two deaths and eleven seriously injured casualties being caused. It was during this raid, however, that Hope Hospital (the Corporation's General Hospital) sustained its first injury—a portion of the premises formerly known as the Old Peoples' Homes but then in use as an annexe to the hospital, being demolished. In this incident, the results were curious because, although a considerable number of the patients were accommodated in buildings adjoining that which was demolished, and although the roofs of these buildings were damaged and the windows blown in, only three minor casualties were caused.

The Raid of 3rd October, 1940.

On this date, a minor raid took place in a thickly populated quarter of the City, which caused three deaths and two other serious casualties. Apart from these the most serious effect of this raid was that a portion of the Salford Town Hall was badly damaged.

The Two Heaviest Raids—22nd/23rd and 23rd/24th December, 1940.

(*a*) *22nd/23rd December*, 1940.

This raid, which lasted from 19.11 hours until 07.06 hours, was the first of the two heaviest raids on the City, which occurred on successive nights. On this night, the Casualty Services were in almost continuous action, and

First Aid Parties were called out to deal with 86 occurrences out of a total of 230, these being fairly evenly distributed about the City. It was during this raid that Hope Hospital suffered its heaviest disaster, as a result of a land-mine striking the Administration Block, which was completely demolished. Fortunately, not a single patient was injured, but the hospital staff suffered grievous blows through the deaths of their Medical Superintendent—Dr. J. Dudgeon Giles, O.B.E. ; the Matron—Miss M. J. C. Ross, R.R.C. ; and four other members of the staff, including the Assistant Steward. On this occasion, the evacuation arrangements proved their worth and efficiency for, within a few hours, large numbers of patients were transferred to other institutions.

This disaster, of course, added materially to the work of the Casualty Services, for Hope Hospital ceased for the time being to be a receiving hospital for casualties. Alternative arrangements for the reception of casualties which would ordinarily have been taken to Hope Hospital were quickly made at Salford Royal Hospital and Crumpsall Hospital, Manchester. It is satisfactory to note that, apart from the additional time involved in the length of journeys, the work of the Services was unimpaired by this complication. This was particularly gratifying in view of the fact that, out of the six First Aid Party and Ambulance Depots, two—i.e., those at the Regent Road and Seedley Council Schools—were seriously damaged by high explosive bombs ; in addition, the roof of the Depot at Blackfriars Road Council School was ignited by incendiary bombs. As a result of the splendid work by the personnel of the latter depot, not only was the building saved but, even while the fire was in progress, no call for either First Aid Parties or vehicles was left unanswered.

(*b*) *23rd/24th December,* 1940.

On this night occurred the second of the enemy's heaviest raids and, although the duration was much shorter, being only from 19.12 hours until 01.23 hours, its weight and intensity were such that there was little to choose between the two raids from the point of view of casualties. The main difference was that, on this night, the bombing was largely concentrated on the south and south-west portions of the City.

The Casualty Services were again in action during the whole of the night, and First Aid Parties and Ambulances were summoned to 71 occurrences out of 98. The only remaining Casualty Receiving Hospital in the City, namely Salford Royal Hospital, was put out of action as a receiving hospital fairly early in the raid by blast from a parachute mine which fell in its immediate neighbourhood. Here again, considerable damage was done to the fabric of the hospital, though on nothing like so large a scale as that endured by Hope Hospital on the previous night, but once more, no casualties were inflicted upon the patients or staff. The position was rendered considerably more difficult than it has been hitherto because the effect of this new blow was that every casualty requiring hospital treatment had now to be taken outside the City. Arrangements were immediately made for the diversion of new casualties to Crumpsall Hospital, Manchester, and, as a result of the effective co-operation of everyone concerned, this diversion was carried out with the minimum of delay.

It is felt that it should be placed on record that, in spite of the weight of the attack and the special difficulties caused by the disasters to the two hospitals referred to, every call received at a First Aid Party and Ambulance Depot during both these nights was answered immediately. In no case were personnel or vehicles found wanting in number of efficiency, and casualties were removed from the streets in the shortest possible time. It is of great interest to note that, although the conditions were absolutely new to the vast majority of the personnel (many of whom were under fire for the first time), they seemed to vie with one another in their anxiety to attend at incidents. The only incident in which any suggestion of delay in the attendance of the Casualty Services has been made was that which occurred in the Everard Street area of Salford at approximately 23.15 hours on 23rd December, 1940. This delay, which certainly occurred, was due to the fact that the Wardens who, in the ordinary course of events, would have notified the Control Centre of the incident, were themselves killed while, at the same time, the telephone service was put out of action. As a result, the incident was not reported to the Control Centre until 01.18 hours.

On both nights, the communcations were hindered to a certain extent by damage to telephone lines over a wide area which included the Public Health Department, two First Aid Posts and three First Aid Party and Ambulance Depots. Transmission of messages between these and other Depots and Posts and Control Centres was carried on by a messenger service which functioned with the greatest efficiency.

During the two nights, it is estimated that 301 high explosive bombs (51 of which failed to explode), in addition to 10,000 incendiary bombs and 29 mines (three of which did not explode), were dropped within the City boundaries.

Fixed First Aid Posts.

The whole of the First Aid Posts were in action during these two heavy raids, and the following table shows the number of casualties treated at each Post :—

Regent Road Baths First Aid Post	87
Blackfriars School First Aid Post	88
Leicester Road First Aid Post	83
Littleton Road First Aid Post	34
Pendleton Baths First Aid Post	101
Seedley Baths First Aid Post	60
Adelphi First Aid Post	11
Docks First Aid Post	6

As in the case of the First Aid Party and Ambulance Depots, considerable damage was caused to certain Posts, *e.g.*, the roofs of the First Aid Posts at Regent Road, Pendleton, and Seedley were damaged by blast, while Blackfriars Road Post, which is situated in the same building as Blackfriars Road First Aid Party and Ambulance Depot, continued to operate while the roof was blazing. In the damaged Posts, treatment of casualties was carried on throughout both nights and, as the electricity supply was cut off, the staff worked by the light of candles and hurricane lamps. Here again, the devotion to duty shown by whole-time and part-time volunteers was exemplary for, although they were not actually engaged in the open during the raids, in many cases their work was carried on without flinching while high explosive bombs were falling in the immediate vicinity of their Posts.

Casualties from 22nd to 24th December, 1940.

The following table gives particulars of the casualties suffered in Salford as a result of the air raids of 22nd/23rd, and 23rd/24th December, 1940 :—

	Total.	Slightly Wounded.	Seriously Wounded.	Dead.	Missing, Believed Killed.
Men	665	466	105	84	10
Women	288	145	63	76	4
Children	82	37	9	34	2
Sex Unknown	3	...	...	3	...
	1,038	648	177	197	16

The Raids between 1st January, 1941, and 2nd June, 1941.

Fortunately for Salford, the comparative immunity from raids which was enjoyed early in 1941 allowed a certain amount of rehabilitation to be effected.

The first raid during this period occurred during the night of 11th/12th March, 1941, when 11 people were killed and 27 seriously injured. It was during this raid that a bomb struck the Operating Theatre at Ladywell Hospital (the Corporation's Infectious Diseases Hospital), at the same time killing a stoker who was acting as a firewatcher.

The second raid occurred on 16th April, when two cyclist messengers were killed while proceeding to their respective Posts ; in this raid again, very little material damage was caused.

Another minor raid occurred on the night of 7th/8th May, 1941, when again only a few casualties were caused, four people being killed and seven seriously injured, but a considerable number of houses were damaged.

The last and heaviest raid of this period occurred on the night of 1st/2nd June, 1941, when the following casualties occurred :—

	Men.	Women.	Children.	Total.
Deaths	20	24	...	44
Detained in Hospital	28	10	...	38
Other Causes : (First Aid Posts)	70	28	2	100
	118	62	2	182

Although this raid only lasted from 00.37 hours to 02.50 hours, it was remarkable in its intensity, for 75 high explosive bombs (five of which failed to explode), in addition to 1,500 incendiary and four oil incendiary bombs, were dropped within the City boundaries. A notable incident during this raid resulted in severe damage being caused to Salford Royal Hospital. This institution received a direct hit, as a result of which a number of nurses who were off duty at the time were buried. Thirteen of these nurses died from their injuries, but no patients were injured. The Casualty Services rendered valuable aid in the extrication of the trapped nurses. As a result of damage to the hospital, 16 patients were transferred to Winwick Emergency Hospital and 84 were conveyed to their homes.

Damage to Hospitals.

Hope Hospital (the Municipal General Hospital) was damaged by hostile action on no fewer than four occasions, details of which are as follows :—

(*a*) On the night of 5th September, 1940, when a bomb of medium calibre demolished a store forming part of the South Annexe. This damage consisted of broken windows and damage to the roofs of four pavilions of the Annexe, in which patients were accommodated at the time. Only three slight casualties occurred to patients and none to the staff. The material damage included interruption of the electricity and gas services and, in addition, the main sewer of the hospital was broken. It was not necessary to evacuate patients except to another part of the hospital.

(*b*) During the heavy raids of 22nd/23rd December and 23rd/24th December, 1940. In the first of these raids, serious damage was caused, the whole of the Administration Block, including Offices, Out-Patient Department, Plaster Room, Receiving Ward, Stores, Church, Sewing Room, etc., being blotted out. The whole of the hospital records were lost in this disaster. As already stated, in addition to the material damage, the hospital suffered irreparably by the deaths of Dr. J. Dudgeon Giles (Medical Superintendent), Miss M. J. C. Ross, R.R.C. (Matron), and four other members of the staff, including Mr. H. Perrett (Assistant Steward). The whole of the services, i.e., gas, electricity, water, were interrupted for varying periods. Fortunately, the hospital extension—a comparatively new building—was little damaged, and so remained capable of being used as a complete unit. Out of more than 1,200 beds, the accommodation was reduced temporarily, as a result of these raids, to only 256. Patients were evacuated as follows :—

Queen's Park Hospital	71
Whittingham Emergency Hospital	139
Townleys Hospital	100
Crumpsall Hospital	46
Emergency Hospital, Winwick	143
County Mental Hospital, Prestwich	39
Isolation Hospital, Warrington	2
Whitecross Hospital, Warrington	13
General Hospital, Warrington	39
Park House, Manchester	46
	638

(*c*) On 11th/12th March, 1941, when incendiary bombs caused fires which were extinguished only after considerable damage had been done to the roofs of several pavilions and the Nurses' Home. Excellent work in the extinguishing of the bombs was carred out by hospital personnel, including nurses. Eighty-nine patients were evacuated to Winwick Hospital.

(*d*) On the night of 7th/8th May, 1941, when the Nurses' Home was further damaged by bombs falling nearby, although no direct hit was experienced. As a result of this raid, the windows at the front of the home were extensively damaged ; the roof also sustained minor damage. It was not necessary to evacuate any patients on this occasion.

Salford Royal Hospital (Voluntary Hospital) was severely shaken by the explosion of a land mine which fell near to it on the night of 23rd/24th December, 1940. All the windows were broken and the roof was damaged. Fortunately, however, no patients or members of the staff were seriously injured. Patients were evacuated as follows :—

Winwick Emergency Hospital	40
Whittingham Hospital	18
Manchester Eye Hospital	1

The hospital suffered very seriously, however, on the night of 1st/2nd June, 1941, when it received a direct hit from a heavy bomb which demolished a large part of the front of the fabric of the hospital (in which the Nurses' Home is situated), and brought about the deaths of 13 nurses who were buried beneath the debris. By a strange freak, the damage to the fabric of the institution was very localised and not a single patient was injured. As a result of this raid, 16 patients were transferred to Winwick Emergency Hospital, and 84 to their homes.

Ladywell Hospital (Infectious Diseases Hospital). In spite of the dangerous situation of this institution, damage was sustained on only two occasions, and on only one of these was the damage serious. A number of bombs fell in the grounds of the hospital on the nights of 22nd/23rd December, and 23rd/24th December, 1940, without actually hitting any building, the only result being damage to a subway and the breaking of a number of windows in two ward blocks. More serious damage was occasioned, however, on the night of March 11th/12th, 1941, by a bomb which demolished the Operating Theatre, and at the same time damaged by blast a number of other buildings, including the Administration Block and Ward Blocks. Services were interrupted to a considerable extent, and it was decided to evacuate such patients (most of whom were Tuberculous patients) as could be moved, to their homes and other infectious diseases hospitals, or to the Nab Top Sanatorium, Marple. The numbers of patients so evacuated were :—

December, 1940—

Florence Nightingale Hospital, Bury	37
Astley Sanatorium	35
Hope Hospital	1
To their homes	27

March, 1941—

Florence Nightingale Hospital, Bury	2
Astley Sanatorium	2
Ainsworth Hospital, Bury	5
Monsall Hospital, Manchester	38
Nab Top Sanatorium, Marple	28
To their homes	19

Mobile First Aid Posts.

On only one occasion was a Mobile First Aid Post brought into action—namely on the night of 23rd/24th December, 1940. This Post was dispatched to an incident at Chandos Grove, Pendleton, but, on arrival, its services were found to be unnecessary as the casualties had already been dealt with by First Aid Parties.

Casualty Services Control.

The Casualty Services Control established at the Control Centre maintained at the Castle Irwell Racecourse was found to be of the greatest value, as it enabled the closest possible liaison to be maintained with all Civil Defence Services. It proved of particular value in connection with the incidents which put out of action Hope Hospital and Salford Royal Hospital.

Damage to Water Supplies, Sewers, etc.

Water mains were damaged on a number of occasions but, in all cases, repairs were quickly carried out, and the City did not suffer in any way from inadequate or polluted water supply.

I am indebted to the City Engineer for the following particulars relating to damage to sewers and sewage works :—

“ The most serious damage was caused at the Sewage Disposal Works on 23rd December, 1940. There were several direct hits on important main conduits by high explosive bombs. Incendiary bombs no doubt also played a part, whilst molten pitch from the adjacent works which were on fire, flowed into the sewers and overflows, and filled them for considerable lengths with pitch which solidified. Inflammable matter, coming down the sewer, caused fire in the Screen Chambers and Detritus Tank. The roofs of nearly all the buildings containing plant were burnt out ; screens, dredger, pumps and transformer house were put out of action, and very extensive damage generally was done.

“ It is impracticable to condense into a short statement either the extent of the damage or the arrangements made for dealing with it. Briefly, it may be said that the sewage from the low-level sewer had of necessity to flow direct to the Ship Canal for some time, but it was practicable to maintain the high-level flow, which may be regarded as about one-third of the total.

“ Without a moment’s delay, a general engineering contractor was engaged upon the sewers, etc. ; a building contractor upon putting on temporary essential roofs ; the machinery makers were brought to the site for dealing with the screens and dredger, the pump makers for the pumps, and the Corporation’s Electricity Department immediately tackled the electrical work. Direct labour was also engaged in general clearing up. All hours of daylight were worked every day.

“ The low-level sewage was again in full treatment early in February, but a number of difficulties had still to be contended with after that. It is difficult to see how there could have been any injurious effect to health, except possibly through a portion of the sewage passing direct into the Ship Canal for a few weeks. The weather was cold, and on only one occasion was there any local flooding at the works.

“ As far as the sewers themselves were concerned, considerable damage was caused by enemy action to a large number of sewers between September, 1940, and December, 1941. The total number discovered damaged and dealt with up to now has been 85. The heavy raid on 22nd and 23rd of December, 1940, accounted for 46 out of these, and that on the night of Whit Sunday, 1941, for another 26. The main outfall sewer—7 feet 6 inches by 7 feet in size—was damaged in several places, and others have varied in size down to 9 inches diameter. The depth at which damage has been sustained has been up to 33 feet.

“ Immediately after a raid, a careful examination of all damaged sewers was carried out to locate the more serious cases, so that the necessary labour could be concentrated upon restoring the normal flow before proceeding with the permanent repairs.

"   No extensive flooding of roads or property developed, and it was
" found that even a badly-damaged sewer allowed a considerable flow in
" most cases. Quick action prevented floods developing. Pumping plant
" was always in readiness and, during actual reconstruction work, a great
" deal of pumping was necessary. The position was not, however, without
" its very serious aspects because, in addition to the very serious damage
" done at the Sewage Works, a number of unexploded bombs existed for
" some time in positions far too near to important overflows."

Damage to Houses.

The appended figures relate to houses either completely destroyed or very badly damaged, namely :—

Completely destroyed	462
Very badly damaged	1,206
Badly damaged and beyond possible occupation	2,275
	3,943

The total number of houses damaged in some degree, however, was in the neighbourhood of *25,000. The number of people for whom alternative accommodation had to be found at various times was approximately 20,500 within the City, and 6,200 outside the City. These were accommodated in Rest Centres and Billets, arrangements for which were made by the Public Assistance Committee. In addition, several thousand people made arrangements privately for their evacuation from the City following enemy action.

* The total number of houses in the City was approximately 53,000.

Honours Awarded to Casualty Service Personnel.

The honours gained by members of the Salford Civil Defence Casualty Services personnel were as follows :—

3rd October, 1940.	Mr. H. Shedlock, Depot Superintendent, Regent Road First Aid Party Depot—commendation for Gallantry.
22nd/24th December, 1940.	Mr. G. Walley, Ambulance Driver, Leicester Road Depot—awarded British Empire Medal for devotion to duty, and Gallantry.
	Mr. N. Dantzic, First Aid Party, Leicester Road Depot—awarded British Empire Medal for devotion to duty and Gallantry.
1st/2nd June, 1941.	Mr. D. M. Barlow, Staff Officer—awarded George Medal for devotion to duty and Gallantry.

Summary.

The following is a summary of the foregoing information :—

Hospitals Damaged. The two Casualty Service Hospitals in the City, namely, Hope Hospital and Salford Royal Hospital, have both been damaged on more than one occasion. Ladywell Hospital, the Corporation's Infectious Diseases Hospital, was damaged on one occasion.

First Aid Party and Ambulance Depots. Three of these Depots were damaged, two—Regent Road and Seedley Depots—by high explosive bombs, and one —Blackfriars Road Depot—by incendiary bombs.

First Aid Posts. Four Posts were damaged, three—Regent Road, Pendleton and Seedley—having their roofs severely blasted as a result of high explosive bombs, and Blackfriars Road as a result of incendiary bombs.

Damage to Property. Approximately 25,000 houses have been damaged, including over 2,700 houses either demolished or rendered unfit for further occupation, within the City boundary. People have had to be evacuated at various times, and found accommodation elsewhere.

Bombs. Estimated number of bombs dropped by planes on Salford :—

High Explosives	512	(73 of which did not explode).
Mines....................	29	(3 of which did not explode).
Incendiary Bombs....	12,760	
Incendiary Oil Bombs	18	

Raids. It is interesting to note the number of actual raids which occurred on the City : the total number was 15, and these were :—

July, 1940	1
September, 1940	1
October, 1940.............	6
December, 1940	2
January, 1941	1
March, 1941...............	1
April, 1941	1
May, 1941..................	1
June, 1941	1

PARTICULARS OF CASUALTIES OCCURRING IN THE CITY OF SALFORD.

	Dead.			Injured and Detained in Hospital.			Injured and Not Detained in Hospital.			Missing—Believed Killed.		
	M.	W.	C.	M.	W.	C.	M.	W.	C.	M.	W.	C.
5th September, 1940	1	1	...	9	2	...	23	9	4	...	...	...
3rd October, 1940	1	1	1	...	2	...	10	4	2	...	...	...
11th October, 1940	...	...	...	...	...	...	5	5	...	...	...	...
22nd to 24th December, 1940	87	76	34	105	63	9	466	145	37	10	4	2
12th March, 1941	5	5	1	16	10	1	54	20	5	...	...	...
16th April, 1941	2	...	...	6	3	...	6	6	2	...	...	...
7th May, 1941	3	1	...	3	4	...	16	12	3	...	...	...
2nd June, 1941	20	24	...	28	10	...	70	28	2	...	...	...
October, 1941	...	...	...	...	...	...	1	1	...	...	...	...
	119	108	36	167	94	10	651	230	55	10	4	2
	263			271			936			16		
	1,486											

REPORT

OF THE

SCHOOL MEDICAL OFFICER

To the Chairman and Members of the Education Committee.

Mr. Chairman, Ladies and Gentlemen,

> *" The truth is that schools have to do more than merely train the mind and body of the child ; they have to eradicate the results of last century's hectic industrialisation. They are not only educating ; they are also performing a great eugenic function and rectifying some of the great social injustices of the past."*
>
> *The Times—quoted in " The Health of the School Child," Annual Report of the Chief Medical Officer of the Board of Education for the Year 1938.*

This quotation is apt in Salford's case, for Salford was a place unkindly treated by the industrial revolution. With adverse social and economic conditions the health of our school children demands special care. To this purpose, some of the efforts you and your staff have made during 1946 *are recounted in the following pages.*

It is a pleasure to record appreciation, firstly, of the consideration which has been given by you, Mr. Chairman, Ladies and Gentlemen ; and secondly, to the teamwork of the staff ; medical, nursing and administrative, upon whom the burden of work detailed in these pages has fallen, and to whom credit is due.

Yours faithfully,

J. L. BURN,

School Health Officer.

Medical Inspection.

A feature of the year was the effort made to establish closer liaison with the teaching staff, *e.g.*, endeavour was made to contact not only the head teacher, but also the class teacher whenever a medical officer visited a school.

Of the 6,553 children who were examined at the routine inspections in schools, one-quarter were found to have some defect and were referred for treatment, or were required to be kept under observation.

THE RAPID SURVEY method was continued in addition to the routine medical inspection, and as far as possible, each child was seen at least twice yearly. I know many decry the rapid survey method as being too superficial an examination, but it must be clearly realised that the rapid survey supplements and not supplants the routine medical inspection. The discovery of a large number of defects (*e.g.* otorrhœa) which were not receiving any treatment is sufficient justification for the survey.

NUTRITION.

The proportion of children whose state of nutrition is not satisfactory continues to be small in relation to those whose nutrition is satisfactory. There is no evidence of deterioration in the past year, rather there is a slight improvement.

Dr. Adcock of the Ministry of Health carried out a survey of the nutrition of 213 Salford children. He has sent me a brief summary of his report which showed that he found the nutrition to be good in 91·1 per cent., fair in 8·9 per cent., and poor in none. This is very satisfactory.

SCHOOL MEALS.

A feature of the year was the increasing number of children who took advantage of the school meals service.

This service helps to ensure that the children are receiving a balanced diet.

Over 700 breakfasts, 10,000 dinners and nearly 400 teas (mostly at Nursery Schools) are provided daily at the school canteens.

A specimen weekly menu of the dinners provided is shown below :—

Monday—Roast beef, beans, potatoes, syrup pudding and custard.
Tuesday—Cheese pie, cabbage, potatoes, date pudding and sauce.
Wednesday—Stew, carrots, potatoes, chocolate pudding and sauce.
Thursday—Meat pie, peas, potatoes, semolina pudding and orange jelly.
Friday—Roast meat, swedes, potatoes, sultana pie and custard.
Saturday—Corned beef, hot-pot, bread and butter pudding.

NERVOUS INSTABILITY.

Dr. H. Heathcote reports :—

" Possibly one of the adverse effects of the war has been to produce rather more signs of nervous strain and instability in some of the children."

URINE TESTING.

An interesting development was the number of children whose urine was tested, there is no doubt any medical examination with any pretence to completeness should include a test of urine. It is significant that out of the 502 children tested, one early case of diabetes was discovered in a youth in whom the test the previous year had been negative. The discovery of this early case alone justifies the time and trouble involved, but also a few cases of albuminuria and nephritis were discovered, and where necessary were referred for further investigation.

MINOR AILMENTS.

A large number of children have been treated. The net cast by the rapid survey is principally responsible for bringing in the high number of children seen and treated at our clinics.

A recent development has been the establishment of morning clinics each day, in two of the larger schools, in order to secure treatment of minor ailments on the spot, and the prevention of loss of school time and danger when the child has to journey from school to a clinic far away.

Full use has been made of penicillin sprays in treatment of impetigo of face and scalp—some quick cures have resulted. It is good to think that our school children have the benefit of the best of treatment facilities.

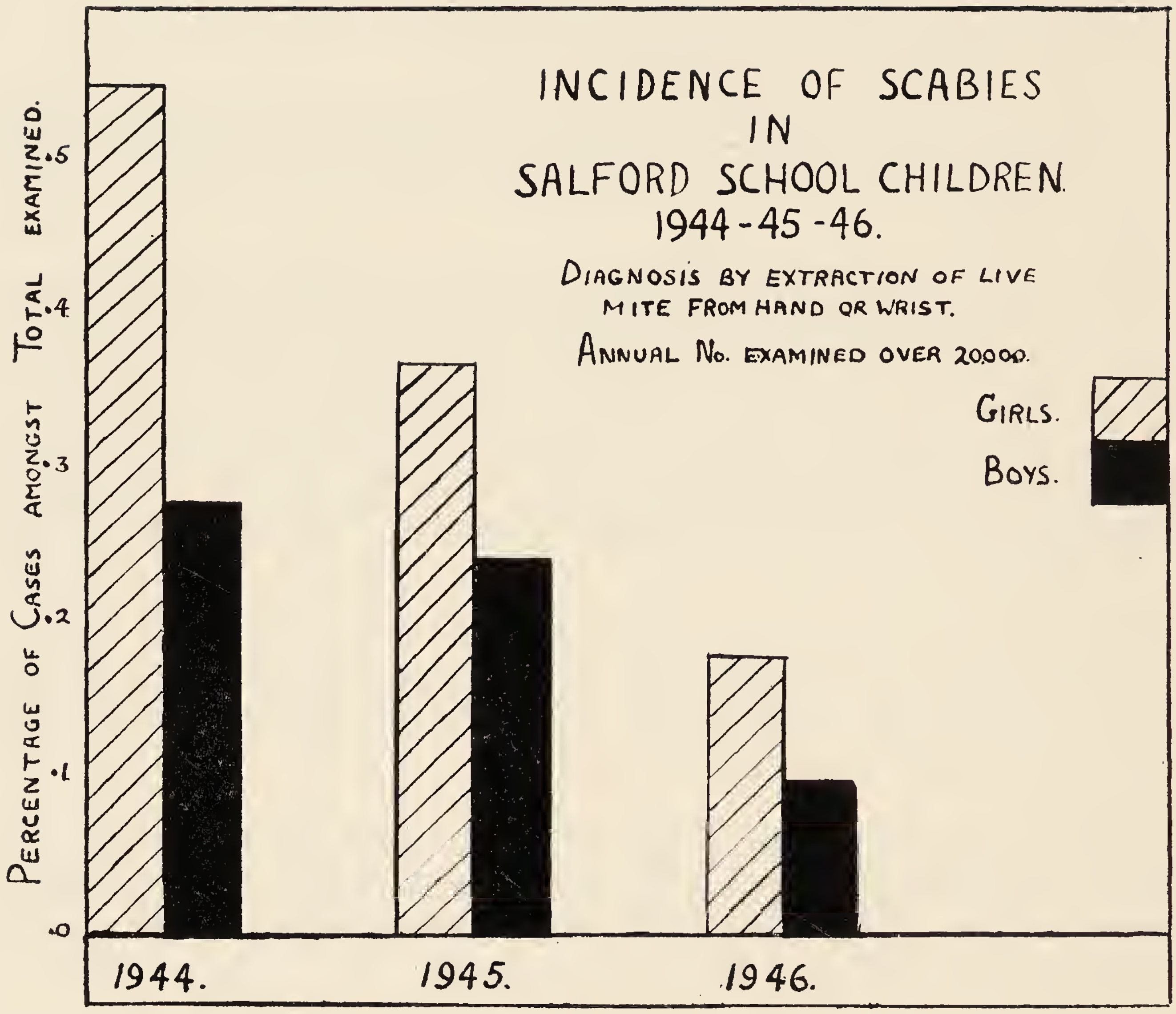
INFECTIOUS DISEASES.

No noteworthy outbreak of infectious disease occurred in the schools. I am pleased to say that over 90 per cent. of Salford school children have received protecting inoculations against diphtheria—now comes the task of administering the reinforcement inoculations to the younger school children.

During the year the Mass Miniature Radiography Unit visited Salford, and 700 school leavers (15 years and over) took the opportunity of having their chests examined. Not one case of pulmonary tuberculosis was discovered. Practically 100 per cent. of the parents of the children responded to the invitation to have their child X-rayed.

VERMINOUS INFESTATION.

SCABIES. A chart is reproduced showing a reduction in the incidence of this disease. Yearly surveys have been carried out for the past three years in August-September and the incidence is now 0·28 per cent.—the standard of diagnosis is the recovery (by extraction) of a live mite. Inspection being made of hands and wrists only. We can be sure that the incidence of the disease is certainly higher than this figure.



An interesting point (which I do not recall appearing in the literature) is that the incidence, in girls, is twice that of boys. One may speculate (for the reason is unknown) that the girls have perhaps more to do with the infants and pre-school children among whom there is a fairly high incidence of scabies. The annual surveys are conducted by specially trained workers and the results can be depended upon.

In the case of louse infestation, careful surveys were also carried out and new insecticides investigated. The incidence of louse infestation according to the figures (which are unreliable) has not altered over the past 25 years. We can be more sure of recent figures for search is made for larval forms of lice as well as for the adult form of lice and for nits.

Handicapped Pupils in need of Special Educational Treatment.

At the end of the year 1946, the following is a list of the number of pupils on the Register of Handicapped Pupils in need of Special Educational Treatment:—

Blind Pupils. 6 pupils all of whom are in special schools.

Partially Sighted Pupils. 20 pupils of whom only 1 is in a special school.

Deaf Pupils. 25 pupils of whom 23 are in special schools.

Partially Deaf Pupils. 108 pupils of whom only 1 is in a special school.

Delicate Pupils. 201 pupils of whom 105 are in special schools.

Diabetic Pupils. 4 pupils all of whom are receiving adequate treatment while living at home.

Educationally Subnormal Pupils. 94 pupils of whom 11 are in special schools.

Epileptic Pupils. 11 pupils of whom 8 are in special schools.

Maladjusted Pupils. 18 pupils.

Physically Handicapped Pupils. 85 pupils of whom 23 are in special schools.

Pupils Suffering from Speech Defect. 647 pupils.

Pupils Suffering from Multiple Defects. 5 pupils.

Medical Inspections at Nursery Classes.

As in previous years, the medical inspection of the children attending Nursery Classes, was carried out by three of the Assistant Medical Officers. The monthly inspection of the former war-time Nursery Classes was discontinued in April. Ninety sessions were devoted to this work, the number of schools visited being 39 and the total number of children examined being 1,615. 786 of these children were found to have some defect. The principal defects found were ear, throat and nose conditions (234) ; dental caries (135) ; bronchitis (104) ; and orthopædic conditions (86).

All three Medical Officers report that although there was a high proportion of defects found, the general health of the children was good. The standard of cleanliness varies considerably in the different areas of the City, but on the whole it has improved. One Medical Officer reports that she inspected the children's footwear in every case and found that there were a number of children with unsuitable or badly worn boots and shoes.

The standard of clothing still leaves much to be desired, both over-clothing and under-clothing still being prevalent.

1,259 of the children seen were immunised.

Cases were referred for treatment to their private doctor, to the various Specialist Clinics, to the Infant Welfare Clinics or Minor Ailments Clinics according to the condition found.

Open-air Schools.

At the beginning of 1946, we had our two open-air schools, Barr Hill in Bolton Road with accommodation for 100 children, and Frederick Road in Peel Park which took up to 80 children. During the floods, Frederick Road suffered such severe damage that it has been closed permanently. This leaves us with a total accommodation of only 100 for the whole of Salford, which is quite inadequate.

In order to get further accommodation as soon as possible, it is suggested that temporary buildings should be erected. The Committee have a good site on the Claremont estate. Now that there is no open-air school in the Broughton area, the question of special transport for the children becomes still more important. It is extremely difficult for parents to make satisfactory arrangements for young children to attend a school regularly when it entails travelling by two buses going to and from the school. The result is that in some cases the parents ask that the child shall be allowed to leave the open-air school and return to the ordinary day school.

Dental Report.

Mr. L. H. Pollitt, L.D.S., reports as follows :—

During the past year the routine examination and treatment of all the Salford School children has been continued and was extended for the first time to the Nursery Schools. In the course of the year, 20,261 children were examined, 10,803 were referred for treatment and of these 8,184 were treated.

About three years ago we started the policy of carrying out all extractions under general anæsthesia. This enables most of the extractions to be carried out in one visit, and, besides the advantages from the parents' point of view, I think that the policy has shown its popularity in the rise of the acceptance rate. In 1945 this rate was about 57 per cent. and last year was nearly 75 per cent., and if facilities could be provided for general anæsthetics to be administered at the Regent Road Clinic as well as at the Police Street and Murray Street Clinics, I think that an even better rate of acceptances might result and more time made available for conservation work which should be the chief aim of the service. During the past year 3,830 general anæsthetics were given by the dental staff and Dr. O'Grady, who attends for three sessions per week as the Specialist Anæsthetist, and 8,024 temporary and 1,899 permanent teeth were extracted. The number of permanent teeth extracted is rather high, but a big proportion of these extractions is connected with orthodontic work.

The Orthodontic Service under the direction of Mr. N. Wild, L.D.S., has been extended to three sessions per week. All types of cases are treated and a large proportion are corrected by means of stainless steel appliances. Cases needing X-rays are referred to Hope Hospital. This service is proving a most popular one and the psychological effect as well as the improved mechanical efficiency are well worth the time spent on this work. The work is at present greatly hampered by lack of accommodation.

Report on Orthodontic Survey.

A survey was undertaken to obtain some idea of the percentage of children requiring orthodontic treatment and to see whether there were any significant variations in economic conditions.

The age of the children surveyed was 7 years and upwards.

The art of orthodontics may be said to be the correction of malposition of teeth causing mechanical or æsthetic deficiency. This is so vague a term that almost the whole practice of dentistry could be said to be orthodontic in nature, and it is probably the interpretation of the term Orthodontic which in the many surveys which have been undertaken have resulted in such a disparity of results. These vary from as low an estimate as two per cent., which is much too optimistic, and as high as fifty-two per cent. which has been described as " purely propaganda." The general consensus of opinion seems to put the proportion at about fifteen per cent. Until an exact method of assessing the necessity for orthodontic treatment can be agreed upon universally, any attempt at estimating the percentage must be largely a personal matter and thus of very little real value from the point of view of pure science, though there is a practical value in estimating the probable needs of a service. For the sake of the present survey, only cases which were thought would benefit from orthodontic treatment in the normal course of work have been considered.

Five schools were included in the survey ; two in the good economic group and three in the poor group. The first group consisted of Broughton Modern School and Tootal Drive School, the poor group of St. Cyprian's, St. Bartholomew's and the Royal Technical College was also included, but the latter school may be considered to give a cross section due to the large proportion of schools from which the pupils are drawn.

School.	Children Examined.	Referred for Orthodontics.	Per cent.
Broughton Modern	410	23	5·6
Tootal Drive	160	18	11·2
St. Cyprian's	120	19	15·8
St. Bartholomew's	160	17	10·6
Royal Technical College	140	12	8·6

These figures give an average of 10·3 per cent. for the cases examined, which is, I think, about the average or rather on the low side as compared with the figures given in the B.D.A., 1891-1897 reports, but it only applies to cases considered as requiring treatment.

There does not seem to be any significant difference between the different classes of schools, though this may be due to the narrow margin of difference in the economic status.

Breathing Exercises, 1946-1947.

This year, much benefit has been felt through having the expert guidance of Dr. R. I. Mackay to help us with the special breathing exercises for children suffering from asthmatic conditions. Our aim is not to have the children attending classes indefinitely, but to encourage the mother to attend with the child, watch and learn the exercises, and realise, not only the importance of attending the clinic twice weekly, but of doing the exercises daily at home. The importance of the mother's part cannot be over-emphasised and it is noticeable that quicker improvement is shown in those cases where co-operation of the mother is obtained than in those children who attend by themselves.

The breathing and nose drill classes continue for the post-tonsil and adenoid cases and the majority of mothers now appreciate that the exercises re-educate the child in correct breathing, which may not follow automatically after the removal of the tonsils and adenoids.

The handkerchief situation has improved this year, and we hope it is because parents now realise the importance of correct nose blowing.

Children Suffering from Cerebral Palsy.

Details of the measures taken during 1946 were :—

1. Intensified ascertainment through all channels (public health personnel, general practitioners, voluntary associations, Cripples' Help Society, etc.).

2. The revision and bringing up-to-date of our register.

3. The co-ordination of a team of specialist workers.

Some of the important members of the team are :—

(*a*) The family doctor or the child welfare medical officer, who may be the first to suspect the defect ;

(*b*) The neurologist to diagnose the exact condition at as early an age as possible ;

(*c*) The orthopædic specialist to advise as to the prevention or treatment of any crippling defects ;

(*d*) The physiotherapist to carry out necessary exercises, etc. ;

(*e*) The psychologist in estimating the mental capacity to assess the educability of the child ;

(*f*) The teacher with special experience in the education of the handicapped child. The speech therapist.

(*g*) The child guidance expert for the child who may be difficult ;

(*h*) The almoner to investigate and where necessary advise regarding home and social conditions ;

(*i*) The school nurse and health visitor to supervise the child's health at school ;

(*j*) Last, but not least, the parent who requires endless sympathy, patience, and perseverance, in order to see that the child receives all the treatment and training which it needs if it is to get the best possible chance in the world.

4. The review by neurologist and medical social worker, following which, recommendations were made and carried out as far as possible with our limited resources.

5. The establishment of a special class for spastic children (who were not receiving any education) at Hope Hospital, as part of the Hope Hospital school, but in this case, living at home and attending for some hours daily. This venture gave special pleasure as it was realised that education and care was being given daily to a group of eight children who previously were receiving no education on account of their crippling defect. A definite improvement was noticed in physical control, in personal habits, feeding and in speech.

A job was found for one spastic, and another spastic youth was recommended for vocational training to a residential training centre. These efforts are small in view of the size of the problem, but they took up much time and they gave to all concerned a feeling that something worth while had been attempted and accomplished.

Foot Clinic.

Mr. Franklin Charlesworth reports as follows :—

The importance and value of the proper care of the feet, particularly in the case of children is becoming more widely appreciated. The Chiropody Clinic in the School Health Service in this city has now established itself, and during the past year the services available in this department have been used extensively.

One instance of the useful service performed by this department has been the treatment and cure of a large number of foot warts. Prompt and effective treatment of detected cases has been the means of controlling and speedily stamping out the spread of these lesions in the various schools thus alleviating and preventing much suffering, and playing a part in the control of absenteeism. Another instance of the practical value of the Chiropody Clinic is the work carried out in the field of preventative medicine. Careful checking of the fitting of footwear, helpful advice, and, when desired, practical assistance to parents in procuring the correct fitting and suitable shoes.

The work carried out since the Chiropody Clinic has been established and the ever-increasing pressure placed upon the department has proved it to be not only an important but an essential part of the School Health Service.

Hearing Survey.

During the year the hearing of 2,174 school children was group-tested by means of the gramophone audiometer. This makes a total of over 18,000 hearing tests performed in Salford.

Of the children who underwent the test, 11·5 per cent. failed, after retest, to reach the required level of hearing, and were listed for further investigation. This entailed the removal of wax from the ears, the performance of an individual audiometer test, and, if necessary, referral to the Ear, Nose and Throat Consultant. This work is continuing.

HEARING LEVELS IN SALFORD SCHOOL CHILDREN, ADOLESCENTS AND ADULTS—AVERAGE FOR EACH AGE GROUP—AS TESTED BY THE GRAMOPHONE AUDIOMETER.

Results are expressed in decibels, correct to nearest decimal place.

Age (years).	Number.	Right Ear.	Left Ear.
6	70	9·4	9·5
7	626	7·0	7·0
8	2,431	4·9	4·8
9	2,522	4·8	5·0
10	2,222	4·2	4·3
11	2,756	4·3	4·1
12	2,752	3·4	3·4
13	2,254	2·8	2·7
14	454	1·7	1·7
15	269	1·3	1·5
16	331	2·4	1·9
17	203	2·0	2·2
18	71	1·7	1·6
19	17	3·5	2·8
20-29	148	3·8	3·6
30-39	279	5·1	5·0
40-49	368	6·4	6·3
50-59	209	10·0	8·3
60 and over	66	13·2	12·2
TOTAL	18,048		

Incidence of Otorrhoea and Tonsillectomy in School Children Recorded during 1946.

When the hearing of each child was tested and a form completed for the gramophone audiometer, an attempt was made to find out by question and, if necessary, by examination, if there was any otorrhœa.

Out of 2,174 tested, it was found that the incidence of otorrhœa in children attending schools where the majority of parents of the children could be included in the " Good " economic group, was : Boys, 6·4 per cent. ; Girls, 7·5 per cent. " Average " economic group : Boys, 8·9 per cent. ; Girls, 7·6 per cent. " Poor " economic group : Boys, 13·7 per cent. ; Girls, 8·4 per cent.

Another interesting feature was the incidence of tonsillectomy. In children whose parents belonged to the " Good " economic group, this was : Boys, 33·3 per cent. ; Girls, 29·5 per cent. " Average " economic group ; Boys, 30·5 per cent. ; Girls, 25·7 per cent. " Poor " economic group ; Boys, 22·9 per cent. Girls, 21·3 per cent.

Study of Hearing Levels in Groups of School Children all known to be Suffering from Defective Hearing, Before and After Administration of Vitamin " A," Together with a " Control " Group.

In 1938, Sir Edward Mellanby investigated the effect of a diet deficient in vitamin " A " and rich in cereals, on the hearing of young dogs. The experiment, which has been fully reported in the " Journal of Physiology " (1938, **94**, page 380), lasted for some months, during which time the hearing of the dogs appeared to deteriorate. After the animals had been killed, Mellanby found evidence of severe deafness in the degenerative condition of the nerves.

It was decided to investigate the effect of the administration of vitamin " A " on the hearing of a group of Salford school children, all of whom suffered from defective hearing due to previous otitis media. Eighty children were divided into two groups of 40 by the selection of alternate children, to form the vitamin group and the control group, and were tested by the individual pure tone audiometer at the beginning and end of the investigation.

A capsule of vitamin " A " containing 7,000 i.u., was given at school daily for 40 days to each of the children in the vitamin group. The controls were given a capsule containing arachis oil, and until the end of the test, it was not known to anyone, other than myself, to which group any child belonged.

At the end of the experimental period, the hearing of both groups of children had improved very slightly. The experiment was continued with 17 children of the vitamin " A " group and 10 of the control group, because of the indecisive results. After 40 further days, the difference in hearing was so small as to be negligible.

If the administration of Vitamin " A " had been beneficial for children suffering from defective hearing due to previous otitis media, then the individual pure tone audiometer tests would have shown obvious improvement in the vitamin group. No significant beneficial result was shown.

Study of Hearing Levels of Groups of School Children of " Normal " Hearing who Received Vitamin Supplements.

A similar investigation was made of the influence of certain vitamins (B. Compound ; Thiamin ; Nicotinamide ; and a multi-vitamin capsule containing vitamins A., B.1, D., riboflavine, nicotinamide and ascorbic acid), on school children whose hearing levels were not regarded as defective—children with " normal " hearing. The group pure tone audiometer was used, and 760 children completed the test. Most of the children received the vitamins over a period of 12 months. All the children received the tablet or capsule at school, with their morning milk. Two control groups were formed. The first consisted of 70 children receiving a daily capsule of arachis oil, and the second was a group of 196 children receiving nothing.

At the end of the experiment the differences in hearing between the vitamin and the control groups, of loss or gain, were found to be negligible.

Lipreading Class.

Under the tuition of Mr. W. Rasburn of the Royal Residential Schools for the Deaf, Old Trafford, the class has been continued.

The children who attended have benefited in varying degrees as is illustrated by the following two reports :—

L.J. Very good progress. Relies greatly on lipreading. Great improvement in self confidence.

A.K. Progress slow but satisfactory. Several absences due to illness.

The Ear, Nose and Throat Clinic.

Dr. Florence Cavanagh reports that :—

" The work of the Ear, Nose and Throat Clinic has continued to increase throughout the last year. The co-operation of the parents has again been an encouraging factor. We have carried on the practice of dispensing simple drops for use in the nose or ears, and this has been much appreciated. The policy of giving intensive treatment to cases of suppurative otitis media has brought its reward. All the ears which had only recently developed discharge have cleared up completely with full restoration of hearing and a normal drum—in one of these cases, operation on the mastoid was necessary to achieve this desirable result.

" The greatest change in the work this year has been in the extended use of penicillin to the ears, either as a liquid applied on a gauze wick and inserted into the auditory meatus, or as a powder insufflated into the ear. The results from this treatment in chronic cases of suppurative otitis media have been gratifying. Whereas previously such children attended the clinic daily (many having profuse discharge in spite of this treatment), we now find that the ears become dry and can in many cases be kept dry by one weekly visit to the clinic, This is, of course, an enormous advantage to the child, both from the point of view of the absence of objectionable discharge and also from the reduction of the time away from school, which frequent visits to the clinic entail.

We are still working under difficulties due to shortage of staff. There are long waiting lists for children requiring audiometric tests, for those who need to join the speech-therapy classes and the breathing exercise classes, and a very long list for cases awaiting operation for removal of tonsils and adenoids, washout of sinuses, removal of aural polyps and other simple procedures.

The lipreading class held in the City for children with fairly marked deafness is a tremendous help to those so handicapped, and enables several of these youngsters to remain in an ordinary school and benefit from education there.

" Many cases have to wait too long before being seen at the Aural Clinic, but we hope later in 1947 to increase still further the number of clinics held weekly and so prevent this delay."

The Ophthalmic Clinic.

Dr. John Scully reports that during the past year this Clinic has been held three times weekly at Victor Street up to the end of August, and from that date to the end of the year on an average of seven clinics per week. The clinic is under the supervision of an Ophthalmologist, with a trained Nurse and an Orthoptist, and 3,937 attendances have been made during the year. These were, errors of refraction, 3,201, and other defects or diseases of the eye, 736. Children attend this clinic who suffer from defective vision, squint and external diseases of the eye. They are referred by the School Medical Officers in their routine inspection of schools, by the teachers and in increasing numbers by the parents themselves. Children of all ages, from birth to leaving school, including secondary schools, are referred for treatment.

REFRACTION CLINIC. Children attend who are suspected to be suffering from some defect of vision. The normal attendance is three visits. At the first, a test of vision is taken and any squint or other external abnormality is noted. If a defect of vision is found, mydriatic eye drops are given for daily application for a week. These drops affect the sight of the child for reading and close work, but the distant vision is unaffected, so the children can attend school but are unable to read. In the case of Grammar School children drops are only given for one or two days so as to avoid interference with their studies. At the second visit a refraction and complete examination of the eyes is made and a subjective test with lenses is completed and finally a prescription for glasses is given where necessary. In some cases, where the subjective test is unsatisfactory under a mydriatic, a further visit is made two weeks later when the effect of the drops has disappeared. The child is then directed to the optician who measures him/her for spectacles. When the glasses are ready, the child attends finally to collect them when the lenses and fitment of the frame are examined and the child's distant and near vision wearing glasses are tested—any necessary adjustment being made. Spectacles are supplied to the children immediately on completion, irrespective of payment. The nickel silver framed glasses are now supplied free of charge, but if parents desire a more elaborate frame, a deduction is made corresponding to the price of the free glasses.

Contrary to expectation, the fact of free provision has not involved abuse, but has resulted in an increase willingness to obtain and wear glasses, and there is no noticeable increase in breakages.

Artificial eyes are now supplied free of charge, and it is gratifying to note that none of the few children to whom this applies has been without an " eye."

A high percentage of cases referred, attend this clinic and are accompanied by their parents or a responsible adult. The parents are invariably co-operative and willingly follow the instructions and advice given, obtaining glasses if recommended. There is a noticeable diminution in prejudice against the wearing of glasses since they were provided free. This minimum prejudice from parents and children is generally due to fear of accidents and breakages or fear of teasing from other children ; but most frequently prejudice is unspecified against the wearing of glasses. This is overcome where the advantage to be gained by better sight was demonstrated.

All repairs and adjustments are dealt with immediately and are not placed on the waiting list. All cases sent as " urgent " by the teachers and doctors are given an early appointment, also Child Welfare cases and older children accompanied by parents who are concerned about their children's sight.

The number of glasses prescribed, 1,362, may seem high—it should be noted that these are not all new cases, many being a change of prescription from that which the child has previously been wearing. The number of repairs is similar to that in previous years and these are now attended to more promptly and effectively. Glasses are never prescribed unless essential for the good of the child's sight and for the alleviation of symptoms.

There are a number of children at present in ordinary schools who would be better accommodated in special sight saving classes. These number 20. They are composed of children with high myopia, and other children with diseases or degeneration of the retina. Steps are now being taken to accommodate such handicapped children.

DEFECTIVE VISION. Children with defective vision may be divided into hypermetropes, myopes and squints.

HYPERMETROPIA (Long Sight).

These form the majority of cases and may be divided into simple hypermetropia and compound hypermetropic astigmatism. They are defects from birth, and are due to the shape of the eye being short in length from before backwards ; and in the case of the astigmatics the curvature of the cornæ is not equal over the whole of the surface. Symptoms may be caused at any time in life, but are most frequent when there is increased close work, and consists of headaches, difficulty with close work, reading, sewing, etc., and, an inability to see accurately what is written on the board when in school. Glasses are usually prescribed for all the time in school and close work at home, but in the higher degrees, they may have to be worn constantly. There is a tendency to improve as the child grows older and troublesome symptoms are avoidable when glasses are worn.

MYOPES (Short Sight).

These include cases of simple myopia and compound myopic astigmatism. Myopia usually shows itself in the slightly older child from 10 years upwards. It is generally due to an increase in length from the front to the back of the eye, and tends to increase during the growing years, especially in the teens, usually ceasing to deteriorate when general growth stops. In some cases it is hereditary and then shows itself at a much earlier age, and is consequently more serious. The main symptom is difficulty with distant vision, seeing the board in school, destinations of trams and buses, though reading and close work may be quite clear. In the early stages headache may be present but not always. Thus the the condition is often definitely established before any complaint is made. Glasses are invariably prescribed in these cases and advice is given to wear constantly, because though the children can see to read quite well, excessive close work tends to aggravate the condition. These children are warned against reading too much and especially for too long a time. In early cases one sometimes has to insist on the child wearing glasses as he or she does not realise what good distant vision may mean.

Much time is spent with children suffering from myopia in making sure that the parent and child understand instructions. Typed copies of instructions are handed out in each case. Myopia is more prevalent in the Secondary Schools because of the extra study these schools entail, and because of the longer school life—this being especially the growing period of life, the usual time for Myopia to increase. It is important to try to arrest the progress of the Myopia in the early stages as these children often wish to continue their studies at college or elsewhere—many professions are closed to applicants with a high degree of Myopia. Myopes are invited every six or twelve months, re-examined and their lenses changed according to the progression of the Myopia.

STRABISMUS (Squint).

These patients may be Hypermetropic or Myopic (usually the former) and one eye may turn inwards or outwards (usually the former). The defect is obvious to the parent, who usually seeks advice soon after its commencement. Glasses are invariably prescribed in these cases and constant wear is advised, whatever the age of the child, provided the child is stable on its feet. Parents are usually quite willing to obtain glasses however young the child. After the child has obtained the glasses he/she is referred to the Orthoptist for treatment. This consists in occlusion of the " good " eye in order to improve the vision of the squinting eye, because a squinting eye invariably has defective sight. This treatment may start as early as three years old. The child is seen every 2-4 weeks, and the vision of the two eyes noted. When the vision of the two eyes is equal, occlusion ceases, and then at seven years of age treatment on the synoptophore is started, to develop binocular vision. Often by this time the squint has disappeared, certainly whilst wearing the glasses. In cases where the squint is still present whilst wearing glasses and after a course of Orthoptic treatment, an operation may be necessary to straighten the eye and so cure the squint, but this will not improve the vision of the squinting eye if still defective. Operations are now being performed at Hope Hospital fortnightly, and during the year 1946, 31 girls were operated upon, 18 of which were cosmetic operations, and 13 were operation and orthoptic cases. 22 boys were operated upon, 13 of which were cosmetic, and 9 operation and orthoptic cases. The children are admitted for two weeks, then if everything is satisfactory they are sent home and referred to the clinic for post operative treatment. They are also seen after operation by the surgeon at Hope Hospital Out-patients' Department. They do no close work for another two weeks, and do not attend school. Then they may resume normal school and home life, but are examined frequently until the eye has completely settled down. In some cases they are able to leave off wearing their glasses, but this depends entirely on the state of the vision.

There has been again a large attendance of Child Welfare children under school age. Many of these have squints, and if constant, and the child is safely walking, glasses are prescribed, and the parents are willing to get them and see that the child wears them constantly. Thus the child with a squint is seen early, and treatment started. By the time the child goes to school and starts close work, the squint has often disappeared and so the incidence of squint in later life is considerably lessened. If the squint is not constant in these tiny children and only seen occasionally, Mydriatic drops (dilating) are given for the " good " eye and the child is seen at intervals of two to four weeks. The squint frequently improves and may even disappear.

INTERNAL EYE DISEASES.

These are discerned on internal examination of the eyes under Mydriatic drops, and are comparatively rare. Treatment is advised, and the child is seen frequently. As these are often due to general causes, the child is referred to the Special Departments such as the Municipal Clinic, Tuberculosis Department or to Hospital, for further treatment which cannot be given at the clinic.

EXTERNAL EYE DISEASES.

These comprise external diseases of the eyes and lids, and are often referred from other clinics. The number varies with the time of the year, being more prevalent in the spring and autumn when there are cold winds and variable weather. General health is usually lower in spring, following the winter. The children are examined, treatment advised and given, and are seen regularly until cured.

Cases of chronic Blepharitis are becoming rarer, due to modern methods of treatment which are applied regularly, and in persistence in treatment after an apparent cure. Also, in many cases, to the wearing of spectacles which correct their astigmatism. The more serious types of inflammation such as Phlyctenular Conjunctivitis and Ulcers of the Cornea, both of which are likely to lead to defects of vision, are also not so frequent. This again is due to modern medicine clearing up the condition more quickly, before permanent injury is done to the eye, and also to the children's persistence in the treatment both during and after the attack. In many cases these are due to low general health, and the children are referred to the Sunlight Clinic and ordered vitamins, Cod Liver Oil and Malt, etc., and so as the general health improves, the eyes get stronger and not so liable to a repetition of the disease.

The acute suppurative conditions are rarely seen now because the child is treated in the early stages before the deeper tissues are involved.

" Styes " are not seen so frequently now, and the milder infections of lids and conjunctivæ are treated and cured before they involve deeper tissues and the condition becomes chronic.

The milder conditions of Conjunctivitis are still seen, but quickly clear up under regular treatment, and leave no after-effects.

These children are rarely advised to be absent from school, as experience teaches that the condition clears up quicker when the child attends school and attends the clinic regularly, which they tend not to do if absent from school. The risk of infection to other children is very remote, except in the rare cases of acute suppurative conditions.

In many cases both parents are at work during the day leaving the children to play unsupervised in dirty surroundings, and aggravate their condition by rubbing the eyes. In school, however, under more regular supervision such aggravation is often avoided.

Babies are referred to the clinic from the Child Welfare Department with lachrymal obstructions and slight infections of the eyes dating from birth or the early weeks of life. These quickly clear up with modern treatment when applied regularly by the mother, and more permanent damage to the eyes is prevented.

Consultant Skin Clinic.

The clinic has maintained and increased its services during 1946. The primary object of the service is to provide consultant facilities for school children and pre-school children in Salford suffering from diseases of the skin, and the great majority of cases fall in this category. However, the service is also open for adults with skin disorders.

The clinic is available on Thursdays at 2-30 p.m. at Regent Road, and is attended by the consultant dermatologist, Dr. A. Gill.

A dermatological out-patient's clinic is held at Hope Hospital every Wednesday at 10-30 a.m., and beds are available for skin cases in this hospital.

The work of the two clinics has been correlated as far as possible so that facilities of both can be interchanged.

A very long list of dermatological conditions have been discovered, the most common being :—

Impetigo, verrucæ, allergic and infantile eczema, and urticaria.

During the year 370 new cases were seen of which 151 were impetigo. 117 cases of impetigo were treated by aqueous Penicillin spray.

Points of interest during the year are :—

(1) Continued successful use of aqueous Penicillin spray for superficial septic skin conditions (e.g., Staphylococcal and Streptococcal conditions such as impetigo, impetigonised scabies and seborrhœa). It is effective, quick, and easy to use.

(2) Use of Thorium X (Alpha ray) in Acne Vulgaris, Alopecia Areata and Plane Warts. The radio active element is incorporated in varnish or ointment, and is simple to use.

The total attendances at the Regent Road Clinic during the year were as follows :—

Children of school age, 608 ; pre-school age, 97.

Child Guidance Clinic.

Dr. Muriel Hughes reports :—

" The Clinic has now completed five years of service. Primarily sponsored by the Education Authority it is at the same time an indispensable branch of the School Health Service.

" During the past twelve months the work has proceeded smoothly, free from the difficulties of the preceding two years due to illness and shortage of staff. The staff has been complete and has been augmented by two new members, one a psycho-analyst and the other a psycho-analyst in training.

" A further welcome extension of the work has been utilisation of the Clinic by the University as a teaching centre in the new training course for Psychiatric Social Workers. This is a source of great satisfaction to the staff and is regarded by them as of great benefit to the Clinic on account of the assistance rendered by the students and on account of the general stimulation of interest resulting from their presence.

" A further source of satisfaction has been the reconditioning and enlargement of the Clinic premises, which have been extended by the addition of four rooms, all pleasantly decorated and furnished, and equipped with extra play material, so that the work is carried on under greatly improved conditions.

" During the past twelve months we have had some 210 children on our books. Of these 135 have been investigated—65 of these have required analytical treatment ; the remainder have required advice regarding disposal and resettlement and six of them are still under clinic supervision.

" Out of 100 cases which have had full psychiatric investigation, the following list will give some indication of the reasons for referral :—

Enuresis, along with other symptoms	14
Functional nervous symptoms	13
Excessive aggressiveness	9
Moodiness	9
Truancy	7
Backwardness	6
Stammering	5
Phobias and allied symptoms	5
Sexual difficulties	3
Thumb-sucking	1
Tic	1
Vocational guidance	4
Stealing and allied delinquencies	23

" From this list it will be seen that behaviour disorders and delinquency are by no means the only reasons for which the help of the Child Guidance Clinic is sought.

" For the benefit of those who have not had the opportunity of reading previous reports we give the following information regarding the staffing of the Clinic and the respective duties of the three members of the team :—

1. A full time Psychiatric Social Worker whose duties include the general administration of the Clinic, the visiting of homes, interviewing and advising of parents whose children need and are under treatment. The Psychiatric Social Worker has a very wide field of activity in making known the work of the Clinic to other public bodies and in giving advice and in helping to make known the work by giving lectures. The Child Guidance Clinic has a close association between the Day Nursery Association and such bodies as the Maternity and Child Welfare Clinics also Speech Clinics.

2. The Educational Psychologist whose work includes liaison between schools and educational associations and the Child Guidance Clinic, intelligence testing of all children referred, the organisation of remedial coaching for children whose educational backwardness contributes to their difficulties and play therapy with children under treatment. Our Educational Psychologist is employed full time by the Education Authority, but only part time is given to the Clinic.

3. The third member of the staff, the Medical Director, is a consultant Psychiatrist whose duties include the direction of the Clinic Medical Services, the diagnosis of the problems submitted for investigation and the psychotherapeutic treatment of children requiring it, the furnishing of reports to the Educational and Medical Authorities, Juvenile Courts and other public bodies."

Speech Therapy.

The following is a report submitted by the late Speech Therapist, and covers the period from January 1st, 1946, to July 25th, 1946 :—

Several points of interest have occurred since January 1st, the most noteworthy of which have been :—

THE OPENING OF NO. 1, ACTON SQUARE, AS A PERMANENT SPEECH CLINIC.

The centres at Halton Bank School and Regent Road School have been merged into one in a first floor room at No. 1, Acton Square. Work here began on March 14th. At the end of the Summer Term it was agreed between the Director of Education, the School Medical Officer, and the Speech Therapist, that the Broughton Modern School Speech Clinic should also be moved to Acton Square because the medical room which has been used for the Speech Clinic since 1942, has now become more frequently needed by the medical staff. It was never an ideal Speech Clinic because it was very noisy and work was often interrupted by school activities.

The room at Acton Square is very pleasant, of good size, light, and has been recently decorated in green and cream. It is a little too noisy from traffic to be considered perfect, but its advantages outweigh this one disadvantage. Its position next door to the Child Guidance Clinic has been found most convenient. Although it is difficult of access from some distant parts of the city, there are more than enough cases on the waiting list to provide work for the Speech Therapist from children living within easy reach of the new clinic.

Arrangements at the Acton Square Clinic worked smoothly and the change was appreciated by parents, patients, and Speech Therapist alike.

PURCHASE OF MATTRESSES.

Twenty-four small square mattresses were obtained for use at the Speech Clinic. The standard of relaxation attained by the stammerers was considerably improved with this more comfortable type of " bed " for them to lie on.

VISITORS.

Several visitors have been to the Speech Clinic during the period. They expressed their thanks for the opportunity to see the work of the Speech Therapy Department.

HOPE HOSPITAL CLINIC SCHEME.

The possibility of organising a proposed scheme for a session a week for the Speech Therapist at Hope Hospital was investigated. This innovation, it was felt, would make a valuable contribution to the health services of the city.

INTERVIEWS.

The practice has been introduced, now that a permanent Speech Clinic is in existence, of setting aside a visiting day occasionally for the purpose of interviews at Acton Square. This arrangement enabled the Speech Therapist to see and advise upon a number of urgent cases prior to admission. It would have been impossible to interview as many cases had individual visits had to be made to the homes or schools of the children concerned.

Special Investigation Clinic.

During the year, 88 school children attended. Of this number, 80 reported for the first time, and of the remaining 8, 6 paid a second visit and 2 a third visit.

The reasons for their visits were :—

> Examination of heart lesion, suspected or real, 47 ; suspected rheumatic pains, 11 ; and various other complaints such as suspected chorea, suspected or real epilepsy, asthma, anæmia, etc.

Of the children suffering from *definite* cardiac lesions, 80 per cent. were regarded as fit to take part in school life as if they were " normal " healthy children.

83 per cent. of all the children attending the clinic were thought to be fit to attend ordinary school and take part in routine drill and exercises.

PRE-SCHOOL CHILDREN.

Two pre-school children attended the clinic. Each had a congenital cardiac lesion and it was suggested that in the meantime they should be treated as " normal " children.

Physical Education.

The following is a report submitted by the Organisers of Physical Training :—

In the past year many of the things for which we had hoped have not been achieved, yet the existing standards have been maintained and some progress has been made in certain directions. For instance, the return of more of the men teachers from war service has not only assisted the work, but resulted in the revival of enthusiasm for those branches usually associated with boys such as athletics, football, swimming, etc.

The work is reviewed under the following headings :—

(*a*) Physical Training ;
(*b*) Organised Games (including athletics) ;
(*c*) Dancing ;
(*d*) Swimming.

PHYSICAL TRAINING.

Facilities, Equipment and Clothing.

Facilities remain as they were last year, there having been no changes. It is still necessary to press for some space to be set aside in all departments for physical training even should it only be an empty classroom for use when the weather is bad, but unfortunately owing to general conditions prevailing it is not possible to report much progress in this direction, and the fact must still be faced that in inclement weather there are many schools where it is impossible to take a physical education lesson. A marked setback was suffered when it was discovered early in the year that the floors of both gymnasia in the Broughton Modern School had dry rot in them which necessitated, on the advice of the City Engineer, the closure of both rooms. It was not possible to begin repair work for many months, but this has at last been commenced and it is hoped that well before the end of 1947 both gymnasia will be in full use once more. In the meantime both the boys' and girls' departments are making good use of the halls where the portable apparatus is being used.

Repairs have been carried out to many playgrounds during the year, and a large number have also been resurfaced which is very encouraging when one considers the importance to physical education of hard, smooth, well-drained playing surfaces. Unfortunately none of the resurfacing was done in the coloured non-reflecting material which is desirable and it is hoped that when further work is carried out in 1947 this point will be borne in mind.

Air Raid Shelters have been removed from several of the small school playgrounds which has resulted in an increase of playing space for the schools concerned.

A further service which has been reintroduced by the Works Department is the marking of school playgrounds for the use of physical education. Although not done on the same scale as in pre-war years owing to the many other duties and lack of labour available, this is very much welcomed and appreciated by the schools and helps materially in the organisation of lessons. It is hoped to try out in the coming year in one or two schools, some of the new plastic marking of school playgrounds. The initial cost of this is higher than of painting in the markings, but as it wears much longer it should, in the end, prove less expensive in both money and labour.

Some provision of equipment has been made and this is reviewed under the headings, (*a*) large equipment, and (*b*) small equipment.

Large Equipment.

All of the Grammar Schools have adequate supplies of fixed and portable apparatus. In the case of the Modern Schools it was possible to supply benches, box, mats, etc., to both boys' and girls' departments of the one remaining school without portable apparatus, so that all of the Secondary Modern Schools have some large gymnastic equipment.

In the interests of safety and in accordance with custom, Messrs. Neils Larsen and Son Ltd., have carried out their annual inspection of all gymnastic apparatus in the Committee's Schools, making any replacements and repairs deemed necessary, thus ensuring that all is maintained in a good state of repair.

With reference to the provision of large portable apparatus, it is felt very strongly that a far greater provision should be made for the Primary Schools. The trend of modern work favours the introduction of large apparatus at an early age. Such apparatus would, of course, need to be adapted to suit the age group and size of the children, and it was hoped that some experimental work might have been carried out in some Infant and Junior Departments during the past year. Owing to the financial situation this was impossible as the money allowed for physical education was inadequate to meet the ordinary demands of the schools. If the Authority wishes to keep the work in physical education up-to-date in its schools, some provision must be made for the introduction of apparatus of this sort.

Facilities for showering remain as they were last year. A further increase in showers is very desirable as is also the provision of more adequate washing accommodation as outlined in a previous report.

SMALL EQUIPMENT.

The position with regard to small apparatus has remained difficult. Rationing still remains very stringent and in fact the amount of small equipment allocated to the Authority was further reduced from the previous year, being well below the actual needs of the schools. The position was particularly bad with regard to small rubber, cricket and rounders balls, and footballs, and the inferior war-time quality, particularly of the latter, has necessitated more frequent replacements and this, combined with the acute supply problem, has seriously hampered the work. This made very welcome a gift of used tennis balls from tennis clubs in South Africa, collected by Lt. James Hair and sent by him to the Authority for use in their schools. For this act of generosity and goodwill the schools owe to him and the South African clubs which donated the balls a debt of gratitude.

Towards the end of the year restrictions were taken from equipment used for winter activities. Instead, however, of improving the situation, matters became worse as where previously it had always been possible to buy goods in short supply against a permit, when the need for a permit was removed, so it seems was all of the apparatus from the shops.

CLOTHING AND SHOES.

Correct clothing enhances both the enjoyment and the benefits derived from exercise as well as providing valuable training in personal hygiene. Under the Education Act (1944), the Authority may provide the necessary clothing for the subject. With the restrictions made in the financial estimates it has not been possible to do a great deal in this direction although it is felt that there is much ground to be covered. Many schools have improvised clothing from disused blackout material and are to be commended for their efforts.

The position regarding shoes remains unsatisfactory. This is due in the main to the financial situation, the other contributing factor being the restriction of clothing coupon equivalents by the Ministry of Education. It is obviously quite impossible to get really vigorous movement or good footwork where the footwear is not supple and does not allow of the firm grip on the ground, so that in many schools the work is badly handicapped, particularly with regard to such activities as running and jumping. The difference in the quality of the work is very apparent where it has been possible to provide footwear. It has been impossible to obtain shoes in small sizes for infants and young juniors so that no shoes have been issued to schools catering for children in these age groups. We were fortunate in obtaining 613 pairs of plimsolls from the A.R.P. This, however, was the only allocation of shoes it was possible to make during the year. From 1943 to 1946 the Committee has supplied 3,211 pairs of plimsolls for use in the schools. This is very welcome, but there is a school population of over 24,000 so that it is obvious how far short this figure falls of the real need of the schools.

It is, of course, quite impossible to avoid the wearing of any one pair of shoes by more than one child, but it is asked in the interests of foot hygiene that a child should wear socks, preferably clean, when borrowing school shoes.

At many schools, the children do work in their bare feet. This is good for the small muscles of the feet and should aid the tone of these muscles. It is preferable to the practice of using socks without shoes which results in the child slipping and also in complaints from parents who find that this practice results in greater wear on the socks. It is pointed out, however, that the practice of working bare-footed should not be attempted on any floor which has a tendency to splinter or for work which needs a hard take-off or landing from a height as the foot needs the protection afforded by a shoe for these things.

Attention is also drawn to the fact that facilities for washing need to be provided when bare foot work is attempted.

The actual work in Physical Education has been reviewed in age groups as follows :—

(*a*) INFANTS.

The minimum amount of time for physical training for infants who require so much activity should be two periods of 20 minutes daily, one to be taken in the morning where the stress is laid more on the formal type of exercises and which is known as the primary lesson, and the second, known as the secondary lesson, taken in the afternoon to include the lighter type of work such as rhythmics, dancing, games, etc.

All infant departments allow one period daily and the big majority allow the two as required. There are a few departments which find it difficult to allow the five secondary afternoon periods, but without exception all of these manage to allow some secondary periods in addition to the full number of primary lessons.

With regard to the changing of clothes in infant departments, it should be pointed out that the standard at which to aim is for all children to wear simply knickers or trousers. The children can be kept perfectly warm dressed like this in the coldest weather provided the lesson is sufficiently vigorous. Extra care is, of course, necessary in the case of delicate or badly nourished children. On the whole the changing of garments in infant departments is not very good, but considerable progress has been made in some departments, a few having achieved a small percentage of children stripping right down, whilst considerably more have got a percentage of children down to vest and trousers or knickers.

Shoes are a big problem. Owing to the lack of supplies it has been impossible for the Authority to send any soft shoes for children of this age group, but the Organisers wish to thank the many teachers and schools who have improvised shoes for infants thus enabling one of the big difficulties to be partially overcome.

Any report on work done in infant departments would not be complete without mention of the newer aspect of infant work with its much greater informality, greater freedom for the children to experiment and introduction of big portable apparatus.

A party of 15 Head Teachers were taken to Oldham to see some classes of infants and juniors working on these lines. The visit was much appreciated, but unfortunately it has been impossible to make full use of it owing to the non-provision of apparatus due to the financial situation. A few departments have experimented a little with small hand apparatus, but it has not been possible to go further than this.

(*b*) PRIMARY SCHOOLS.

The work in primary departments has been maintained on pretty much the same level as in the previous year. All schools have continued to have the daily 20 minute lesson, usually outside in the school playground. A few more departments have managed to increase the time allotted to the physical training period to 30 minutes which is to be commended. It should be pointed out that although the Ministry of Education ask for a 20 minute period for physical education, this is the *minimum* length of time for which they ask and *not* the standard. As a general policy one would like to see two periods of 20 minutes daily allocated to physical education to the very young age groups in the junior school on the lines adopted in the infant department. The need of physical activity for children aged 7, the age when they move to the primary department, is little, if any, less than that of the 6 year olds in the infants' department. It is realised that this may be difficult to obtain owing to the already great pressure on the time table, but it is something for which to strive.

The changing of clothing for physical education has progressed in the junior departments during the past year. More schools are getting rid of the top layer of clothing and several departments have children stripping to vest and knickers, and in some cases to knickers and shorts alone. This is a step in the right direction and we hope that in the coming year, with further education amongst both teachers and children regarding the discarding of clothing for physical education, much more will be achieved. However, either better washing facilities, or if this is not at present possible, some improvised washing facilities should be installed in many departments where such arrangements are inadequate. These could then be used after the physical training lesson. It is inevitable that some activities will lead to the children dirtying their hands and possibly legs and feet, and in the interests of health education, it should be part of their training that they should wash at the end of the physical training lesson before going on to other subjects or to meals. Ideally the children should be able to shower, but we are far from being able to achieve this.

(*c*) SECONDARY SCHOOLS.

Some progress has been made in schools of this type in so far as it has been possible to appoint more teachers with specialist qualifications and the standard of work has been raised considerably in some departments. In the main, changing in the secondary departments is good, and these departments, in the interests of safety and owing to the fact that apparatus is used, have been allowed a higher percentage of soft shoes. Whilst not being sufficient to allow a pair of shoes for each child, the position compares favourably with that of the primary school.

With reference to the time table for physical education in secondary schools, we would emphasise the daily period for physical education is the ideal at which to aim. Whilst this may be difficult to obtain, the improvement in physique, health, general wellbeing and mental alertness should be ample compensation. It must be pointed out too, that in the secondary school the child becomes the adolescent and that this is a period of quick growth where many minor " habit or occupational " deformities can arise and that a daily physical training lesson would materially assist in keeping these postural deformities at bay.

The Grammar Schools have continued to conduct their classes in remedial exercises with favourable results.

(*d*) ADULT CLASSES.

Some classes, chiefly in connection with Youth Clubs were held during the year. Lack of suitable accommodation and rather drab and dull surroundings in which some classes were held tended to retard progress.

Two classes for Jewish boys who had been inmates in concentration camps in Europe were conducted for a short period during the winter months with some success and enjoyment to the members.

A small group was selected from some of the Salford Youth Clubs to take part in the National Demonstration of Physical Activities held at Wembley on July 6th, and organised by the Central Council for Physical Recreation.

ORGANISED GAMES.

All departments except infants allow one physical education period for organised games. Facilities for the playing of games still leaves much to be desired. Not all departments are able to visit parks or playing fields owing to :—

(1) the fact that there is too little land available to provide games space for all schools ;

(2) the great distance of schools from the available playing pitches. With regard to this latter point the Education Committee's policy of providing transport to playing spaces for organised games has resulted in more schools being able to play their games in parks and playing fields and has been much appreciated by the schools concerned. It is hoped that as more land is derequisitioned, further playing space will become available for the use of the schools.

The two grounds owned by the Authority have been very well used for the year, Lower Broughton Playing Field having accommodated nine departments and Legh Road five departments. Legh Road still awaits further reconditioning after occupation by the R.A.F.

The schools have continued to use the public parks, and some playing accommodation for either netball or football in the winter and rounders or cricket in the summer is provided at the following parks where all available accommodation was used :—

Buile Hill, Bolton Road Playing Fields, Littleton Road Playing Fields, Light Oaks Park, Oakwood Park and Ordsall Park.

Equipment, particularly footballs and netballs, has been extremely difficult to obtain and many schools have had either to go without or makeshift with wornout apparatus.

On the whole the standard of play has improved and the policy of commencing each games period with training in the skills has proved sound.

As regards athletics, that branch of activity which seems to be the Cinderella of all sports amongst schools, there has been a growth of interest and it is very pleasant to see this for much physical benefit, enjoyment and a sense of achievement may be derived from athletics.

In June, the schools were closed for two half days to enable the big inter-schools sports to be held. In addition many schools organised their own school sports, some under extremely difficult conditions. We feel it should be pointed out that in some ways sports meetings of this kind are of more value than the big inter-schools competition, for they offer opportunities to the child of mediocre, and even poor ability, who comprise by far the bigger number in any one school, as opposed to the big meeting which offers opportunity to the brilliant few of which no school can have so very many.

All sections of the Salford Schools Athletic Association which caters for out of school activities in games and sports show progress. More schools have joined the sections for football (rugby and association), netball, cricket, rounders, swimming and athletics, and this means that more children will have taken part in these activities in the evenings and at the week-end.

The Lancashire County competitions in athletics were held on the Lower Broughton Playing Field in June, 1946, and both boys and girls from Salford were selected to compete and the boys' effort in winning the County Championship is worthy of both praise and comment. In addition members of the Salford Schools Athletic Association were selected to take part in the National Championship for schools which were held on the playing fields of Eton in July. It is worth noting that Lancashire won the Championship. Salford Boys and Girls won the following placings in the National Championships :—

Boys :	100 yards	Fourth in the Final ;
	High Jump......	First in the Final ;
	Long Jump	One boy obtained standard ;
	Relay	First in the Final of which one was a Salford boy ;
	220 yards	One heat winner ;
Girls :	150 yards	One Salford girl achieved standard ;
	Hurdles...........	A semi-final winner.

The Parks Department were again very helpful in providing and marking training areas in the parks. These extra training facilities for athletics were used by many more schools which helped materially in improving standard of performance.

Many teachers give up a great deal of their private time and put in much effort in the organising, coaching and running of these out of school activities which help very considerably in raising the standard of performance, and the Organisers of Physical Education would like to tender to them their appreciation and thanks for the work which they are doing.

DANCING.

All infants departments take some form of dancing or rhythmic work as part of their secondary physical education lesson. Dancing should be carried over into the primary schools, and it is pleasing to be able to state that more schools are allocating one of their physical education periods to this branch of the work. It is pleasing to note, too, that dancing is no longer being regarded as a subject purely for girls, and that the boys are taking some part in it. Gain in footwork training, which as a general rule is of a lower standard in boys' work, poise, balance, control, apart from the value in social training are amongst the benefits which they gain from this branch of the work. The dancing takes many forms—English, Scottish, Scandinavian and European peasant dances as well as training in rhythmics being attempted. This is one branch of the work very badly handicapped by the lack of suitable footwear.

SWIMMING.

The aim of the scheme of swimming is :—

(*a*) initially to teach as many children as possible to swim ;
(*b*) to improve the style and performance of those children able to swim and to increase the number of strokes they can perform ;
(*c*) to impart some knowledge and skill in the performance of life saving.

Owing chiefly to the lack of a bath accommodation and in part to the shortage of teachers, it is impossible to implement this scheme to the full. A further bath was derequisitioned by the A.R.P. half-way through the summer, making available three baths in all for the summer season. Unfortunately the plunges are still only open for half days and not full days. It will help the swimming scheme and the standard of work very considerably when the plunges are once more available for the full day.

We have been fortunate in retaining the use of the Cheetham Bath for two half days per week throughout the year, and this is well used and provides valuable swimming accommodation for the schools in the Higher Broughton area.

One bath only is available during the winter months, two afternoons being allocated to girls and three to boys.

The swimming staff consisted, during the summer season, of a full-time man and woman instructor assisted by three part-time men and one part-time woman. Owing to certain difficulties the appointment of the women staff was considerably delayed so that the girls' instruction was of very short duration and this, coupled with the part-time instruction of the previous year, has resulted in a considerable drop in the number of girls taught to swim. The boys, who have been without this break in their instruction, have achieved good results.

During the summer season between 1st April, 1946, and 30th September, 1946, a total of 24,292 attendances were made at the baths, an average of over 1,500 per week. During the winter months the average weekly attendances dropped to 500.

At the end of the summer season the usual certificate examinations were held with the following results :—

	1st Class.	2nd Class.	3rd Class.
Girls	97	112	204
Boys	154	212	354
Total...	251	324	558

Free season tickets on the results of these examinations were awarded to 345 boys and 155 girls.

As a result of the winter swimming programme, examinations of the Royal Life Saving Society were taken, the following awards being gained ;—

	Elementary.	Intermediate.	Bronze Medallion.	Bar to Bronze Medallion.
Girls	44	28	10	3
Boys	28	18	2	—
Total	72	46	12	3

This makes a total of 133 awards gained in Life Saving and is an increase of 66 on the previous year.

In the examination of the Salford Hundred, conducted by the Royal Humane Society, the full number of awards was made, being four medallions to girls and eight to boys.

One of the Modern Secondary Schools organised its own swimming gala which was a highly successful school activity.

The swimming section of the Schools Athletic Association recommenced the Squadron Leagues after the lapse of the war years, and they also held a most successful swimming gala at the Seedley Bath in October, the number of entries and events making it necessary to use the bath on two occasions to complete the programme.

Considered as a whole the standard of work generally shows some improvement, but a great deal still remains to be achieved before the position is wholly satisfactory. The 1944 Education Act is a blueprint for the future, but the Committee's Development Plan shows that it is alive to this and is determined that the future shall be provided for in the years to come. With the provision of adequate footwear and clothes, ample playing space, more gymnasia and swimming baths, we look forward to bringing the children in the Salford schools to full physical maturity, at the same time paying attention to character training and appreciation of the æsthetic side of body movement as well as inculcating in them the right attitude towards social and personal hygiene all of which is physical education's contribution to education as a whole.

APPENDIX.

Summary of Investigations carried out.

Noise in Schools.

Measurements of noise in schools by means of a portable Subjective Noise Meter (Metropolitan-Vickers Electrical Company, Limited) were continued.

In Broughton Modern School, where the main difficulty appears to be an acoustic one, measurements of 45-55 decibels were taken in a classroom, and 80 decibels in the occupied dining hall. The smooth surfaces of the ceiling and walls cause excessive reverberation which is the subject of complaint by most of the teaching staff. Many classroom windows directly overlook the school-yard, and the sound of children playing is often disturbing.

Similarly, at Lancaster Road School, internal reverberation presents the biggest problem. During one fairly quiet lesson with the teacher reading aloud to the class, the noise level reached 52 decibels. Hardly any external noise, apart from that caused by classes having gymnastics in the yard, penetrates to the classrooms.

Trafford Road School. The situation of this school, with regard to external noise, is most unsuitable, with the noise of traffic from the main road on one side, and sounds from the docks on the other. With windows closed, a measurement of 48 decibels was recorded, but with the windows open this increased to 57 decibels.

In this school, as in the majority of others, the teaching staff said they have never known children complain about difficulty in hearing.

St. John's, Broughton. Measurements were taken in the hall which is sectionally divided by curtained and wooden screens, and accommodates three classes. Lessons are arranged so as to obviate interference with other classes. 70 decibels were recorded, and 75 decibels whilst one class was reading in unison. Proper separation between the classes is required if the internal noise is to be lessened.

Foot Survey.

A survey of the foot conditions of Salford school children was commenced towards the end of 1946. The children are examined at the schools by a team of six senior students from the Northern Foot Hospital who work in pairs to standards set by Mr. Franklin Charlesworth. Every child is examined in bare feet for the following conditions : weakness of the longitudinal arch, weakness of the metatarsal arch, defects of the lesser toes, nail defects, hallux valgus, verrucæ pedis, corns and callosities. The feet are measured and the footwear examined for correct size and the degree of serviceability. Three standards are set for each condition : "A," satisfactory ; "B," slight defect ; "C," marked defect. When treatment is required the child is referred to the Chiropody Clinic at Regent Road.

Although the survey is still continuing the following preliminary observations can be made : among the 1,999 children examined, 78 per cent. were well shod and 6 per cent. were very badly shod ; 55 per cent. were accurately fitted and 12 per cent. were wearing footwear at least two sizes too small.

About 1 per cent. were referred to the Chiropody Clinic for treatment.

Colour Vision in School Children.

Good colour vision is now increasingly required in all forms of transport whether by land, air or sea, and in industry and the Services. In recent years much effort has been made to gather information from trade associations and individual firms upon the nature of their requirements as to satisfactory colour vision of the employees in their various departments, and upon the extent to which deficiencies affected their work.

An abbreviated list of the adult occupations requiring good colour vision includes the Royal Navy, Royal Air Force, Army, post-office, police, Merchant Navy, railways, Customs and Excise, cosmetic and clothing industries, etc.

In recent years there has been an increasing conviction that prevocational and school testing of colour vision would be of advantage in view of the occupations of later life requiring a good standard of colour discrimination. It has been made clear that the undetected colour deficient subject may be unsuitable in special branches of a great variety of occupations. Colour defectives in industry requiring personnel with satisfactory colour discrimination frequently cause a loss of time and efficiency.

The Services and railways avoid this less efficient group by systematic testing, and it is obvious that such pre-employment tests would be of advantage to branches of industry where deficiencies are likely to prove a handicap. The vast majority of employees pass into industry direct from school. It thus seems that school tests of colour vision would be far the most satisfactory way of meeting the problem. It is urged that the institution of tests for colour vision of school children, especially boys, would be of advantage. Many school subjects such as chemistry and map-reading depend in some part on colour vision, so that tests should be made as early as possible in school life.

COLOUR VISION IN EVERYDAY LIFE. Defects of colour vision should be brought to the notice of the person concerned in the interests of home and road safety, e.g., a car driver who cannot distinguish illuminated traffic signs is a danger not only to himself, but to everybody using the roads.

COLOUR VISION IN SCHOOL. Up to the present date there has been some intermittent testing of colour vision in school children. In the Annual Report for 1934 of the Chief Medical Officer of the Board of Education, the following statement was made : " Defective colour vision is of frequent occurrence and of importance to the individual. The testing of colour vision is not included as one of the routine activities which form part of an ophthalmic service. Although defective colour vision is permanent and incurable, its ascertainment is of importance to the individual, particularly as regards choice of employment."

TESTING OF SCHOOL CHILDREN. Literature relating to the testing of colour vision in school children in this country is meagre. In Lancashire in 1933, Crawford tested 950 boys and 1,050 girls, using the Collins-Drever Group Test, and on testing the failures individually with the Ishihara Vision Charts found that 4·3 per cent. of the boys and 0·6 per cent. of the girls were colour defective. In Worcestershire in 1934, 564 boys and 449 girls between the ages of 5 and 16 years were tested by Ishihara Vision Charts. 5·5 per cent. of the boys and 0·4 per cent. of the girls were found to be colour defective.

It was decided to make an investigation into defective colour vision in the elementary, secondary, technical and art schools in Salford during the autumn term of 1946. Children were examined of 13 years and over, it being considered that at this age mistakes in the test were less likely to be due to general backwardness and possible nervousness.

The tests chosen were the Collins-Drever Group Test and the Ishihara Vision Charts for subsequent individual testing. A total of 3,198 children of ages 13 to 18 were examined by these methods. The tests were done in a suitable room containing approximately 10 or 12 desks which faced towards the northern light. Each child was supplied with a stencilled chart with spaces for recording the interpretations of the five positions of the Collins-Drever Group Test. In the lower part of the chart spaces were drawn for each of the 26 Ishihara Vision Charts used for individual testing. The pupils were watched closely to prevent copying and were instructed that this would invalidate the test. It became possible in schools of average size (about 300/400) to proceed with the individual test using the Ishihara Charts, and the selection of such candidates was made wherever an error of any type was discovered in the Group Test. The following results of the investigation were obtained. Of 2,056 boys, 220 failed the Group Test, and of these, 106 showed an established degree of colour vision defect, and 21 showed a defect of minor degree. The 106 were made up of 84 anomalous trichromats, 20 incomplete trichromats and 2 dichromats.

None of the 24 candidates of the Art School was found to have defective colour vision.

Of 1,142 girls, 44 failed the Group Test. On individual testing 4 were found to be incomplete trichromats and 3 to have a minor abnormality.

These figures give percentages of 4·9 per cent. boys with established colour defect and 0·4 per cent. girls. The results may be further classified into :—

GROUP 1. Those who failed badly in the test—that is, 4·9 per cent. boys and 0·4 per cent. girls.

Group 2. Those who made one, two or three mistakes which may have arisen from extraneous circumstances such as bad lighting, or nervousness, at the time of the test. These figures were 21 boys in 2,056 and 3 girls in 1,142.

Asthma Clinic.

Under the guidance of Dr. R. I. Mackay, 102 children have been examined at this clinic.

Various tests and analyses have been carried out (including Skin Tests) which have enabled expert advice to be given to the parents.

Breathing exercises, under the supervision of the Physiotherapist, were recommended in 49 instances, and 15 children were referred to the Ear, Nose and Throat Specialist.

It was thought that better housing conditions would be beneficial in 15 instances, and the attention of the Director of Housing has been drawn to this.

Eight children were recommended to be admitted to the Open-air School.

About three-quarters of the children have shown varying degrees of improvement recently.

STATISTICAL TABLES.

MAINTAINED PRIMARY AND SECONDARY SCHOOLS.

TABLE 1.

RETURN OF MEDICAL INSPECTIONS DURING THE YEAR ENDED 31ST DECEMBER, 1946.

A.—ROUTINE MEDICAL INSPECTIONS.

(1) Number of Inspections :—

Entrants	4,504
Second Age Group	—
Third Age Group	2,049
TOTAL	6,553
(2) Number of other Routine Inspections	—
GRAND TOTAL	6,553

B.—OTHER INSPECTIONS.

Number of Special Inspections and Re-Inspections	13,141

TABLE II.

CLASSIFICATION OF THE NUTRITION OF PUPILS INSPECTED DURING THE YEAR IN THE ROUTINE AGE GROUPS.

Number of Pupils Inspected.	A. (Excellent).		B. (Normal).		C. (Slightly subnormal).		D. (Bad).	
	No.	%	No.	%	No.	%	No.	%
6,553	2,013	30·9	4,032	62·0	499	8·0	9	0·1

RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31ST DECEMBER, 1946.

TABLE III.

TREATMENT TABLES.

GROUP I.—MINOR AILMENTS (EXCLUDING UNCLEANLINESS).

Total Number of Defects treated or under treatment during the year under the Authority's Scheme	3,040

GROUP II.—DEFECTIVE VISION AND SQUINT.

Under the Authority's Scheme.

Errors of Refraction (including squint)	3,201
Other Defect or Disease of the Eyes (excluding those recorded in Group I)	736
TOTAL	3,937

Number of Pupils for whom spectacles were :—

(*a*)	Prescribed	1,368
(*b*)	Obtained...	1,362

GROUP III.—DEFECTS OF NOSE AND THROAT.

Under the Authority's Scheme.

Received Operative Treatment.	Received other Forms of Treatment.	Total number treated.
350	214	564

TABLE IV.

DENTAL INSPECTION AND TREATMENT.

(1)	Number of pupils inspected by the Dentist :—		
	(*a*) Routine age-groups		19,081
	(*b*) Specials		1,180
	TOTAL		20,261
(2)	Number found to require treatment		10,803
(3)	Number actually treated		8,184
(4)	Attendances made by pupils for treatment		10,980
(5)	Half-days devoted to :—		
	Inspection	150	
	Treatment	1,656	
			1,806
(6)	Fillings :—		
	Permanent Teeth	4,071	
	Temporary Teeth	653	
			4,724
(7)	Extractions :—		
	Permanent Teeth	1,899	
	Temporary Teeth	8,024	
			9,923
(8)	Administrations of general anæsthetics for extractions		3,830
(9)	Other operations :—		
	Permanent Teeth	2,460	
	Temporary Teeth	651	
	TOTAL		3,111

TABLE V.

VERMINOUS CONDITIONS.

(i)	Total number of examinations of pupils in the Schools by School Nurses or other authorised persons	61,648
(ii)	Number of individual pupils found unclean	1,354

TABLE VI.

SCHOOL MEDICAL AND DENTAL STAFF.

Names of Medical Officers.	Proportion of whole time (expressed as a percentage) devoted to—	
	School Health Service.	Public Health.
S.M.O.—		
John Lancelot Burn	25·0%	75·0%
A.S.M.O.S.—		
Harold Heathcote	100·0%	—
John Laurence Bradley	82·0%	18·0%
Harold Bernard Kilroe	91·0%	9·0%
Anne Rothwell Gratton, Mrs. (part time) ...	45·5%	18·0%
Ramyl Rhydwen	45·5%	54·5%
John Scully (part time)	45·5%	—
Margaret Sproul, Miss	18·0%	82·0%
Marian Maxwell Reekie, Miss	36·0%	64·0%
Kathleen Mary Boyes, Miss	27·0%	73·0%
Dental Officers—		
Senior Dental Officer—		
Assistant Dental Officers—		
Laurence Hilton Pollitt	91·0%	9·0%
Mary Gifford Macleod, Miss	100·0%	—
Joseph Arthur Pilling	100·0%	—
John Reginald Clayton	100·0%	—
Agnes Marianne Paterson, Miss	100·0%	—

Nurses.	Number of Officers.	Aggregate of time given to School Health Service work in terms of whole time Officers.
School Nurses	21	13 whole time and 8 half time.
District Nurses	—	—
Nursing Assistants......	4	Whole time.
Dental Attendants ...	5	Whole time.

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